

ght, 1874, by Cambridgeport Diary Co. of

THE

STANDARD

DIARY



PUBLISHED
FOR
THE TRADE

CALENDAR.

1893.

JAN.							FEB.							MAR.							APRIL.							MAY.							JUNE.						
Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4							
5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8							
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15							
19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22							
26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29							
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4								
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12							
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18								
23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26							
30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2							
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8								
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16							
20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23							
27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30							
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6							
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13							
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20							
24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27							
31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3							

JULY.							AUG.							SEPT.							OCT.							NOV.							DEC.						
Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.							
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4								
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8								
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15								
20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22								
27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29								
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5								
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12								
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19								
24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26								
31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2								

WEIGHTS AND MEASURES.

MEASURE OF LENGTH.

4	In. make 1 Hand.	3	Feet make 1 Yard.
7.92	In. " 1 Link.	5½	Yds. " 1 Rod or Pole
18	In. " 1 Cubit.	40	Poles " 1 Furlong.
12	In. " 1 Foot.	8	Fur. " 1 Mile.
6	Ft. " 1 Fathom.	69	1-6 Miles make 1 Degree.
60 Geographical Miles make 1 Degree.			
1760 Yards } = 1 Mile.			
5280 Feet }			

MEASURE OF SURFACE.

144	Square Inches make 1 Square Foot.
9	Square Feet " 1 Square Yard.
30¼	Square Yards " 1 Rod, Perch or Pole.
40	Square Rods " 1 Square Rood.
4	Square Roods " 1 Square Acre.
10	Square Chains " 1 Square Acre.
640	Square Acres " 1 Square Mile.
Gunter's Chain equal to 22 Yards or 100 Links.	
272¼	Square Feet make 1 Square Rod.
43,560	Square Feet " 1 Acre.

MEASURE OF SOLIDITY.

1728	Cubic Inches make 1 Cubic Foot.
27	Cubic Feet " 1 Cubic Yard.

AVOIRDUPOIS WEIGHT.

27½	Grains make 1 Drachm (dr.) or 27½ Grains.
16	Drachms " 1 Ounce (oz.) or 437½ "
16	Ounces " 1 Pound (lb.) or 7000 "
28	Pounds " 1 Quarter (qr.)
4	Quarters " 1 Hundred-Weight (cwt.)
20	Cwts. " 1 Ton.
2240	Pounds " 1 Ton.

TROY WEIGHT.

24	Grains make 1 Pennyweight, or 24 Grains.
20	Pennywts. " 1 Ounce, or 480 "
12	Ounces " 1 Pound, or 5760 "

APOTHECARIES' WEIGHT.

20	Grains make 1 Scruple.	8	Drachms make 1 Ounce.
3	Scruples " 1 Drachm.	12	Ounces " 1 Pound.

DIAMOND WEIGHT.

16	Parts make 1 Grain (4-5ths Grain Troy.)
4	Grains " 1 Carat (3 1-5th Grains Troy.)

LIQUID MEASURE.

4	Gills make 1 Pint.	31½	Gallons make 1 Barrel.
2	Pints " 1 Quart.	54	Gallons " 1 Hhd.
4	Quarts " 1 Gallon.	252	Gallons " 1 Tun.

DRY MEASURE.

8	Quarts make 1 Peck.	8	Bushels make 1 Quarter.
4	Pecks " 1 Bushel.	36	Bushels " 1 Chaldron.
1 Bushel equal to 2150.42 cubic inches.			

WEIGHT PER BUSHEL OF GRAIN, ETC.

The following Table shows the number of pounds per bushel required, by law or custom, in the sale of articles specified, in the several States of the Union.

STATES.	Barley.	Buckwheat.	Coal.	Corn, shel'd	Corn Meal.	Onions.	Oats.	Potatoes.	Rye.	Wheat.	Salt.	Turnips.	Beans, wh.	Clover S'd.	Timothy.
Maine	48	48	..	56	50	52	30	60	..	60	..	50	64	..	..
N. Hampshire.	..	..	..	56	50	..	30	60	56	60	..	..	60	..	..
Vermont.....	48	48	..	..	..	..	32	60	56	60	70	..	64	60	42
Massachusetts.	48	48	..	56	50	52	32	60	56	60	..	..	..	..	..
Connecticut...	..	45	..	56	..	..	32	60	56	56	..	..	..	..	..
New York.....	48	48	..	58	..	..	32	60	56	60	..	..	62	60	44
New Jersey...	48	50	..	56	..	..	30	60	56	60	..	..	..	64	..
Pennsylvania..	47	48	..	56	..	..	30	56	56	60	85	..	..	62	..
Delaware .....	..	..	..	56	..	..	..	..	..	60	..	..	..	..	..
Maryland.....	48	48	..	56	..	57	32	60	56	60	56	..	62	64	45
Dist. Columbia	47	48	..	56	48	57	32	56	56	60	50	55	62	60	45
Virginia	48	48	..	56	50	..	32	60	56	60	..	56	60	64	45
West Virginia.	48	52	80	56	48	..	32	60	56	60	..	60	60	60	45
North Carolina	48	50	..	54	46	..	30	..	56	60	..	..	..	64	..
South Carolina	48	56	80	56	50	57	33	60	56	60	50	..	60	60	..
Georgia.....	40	..	80	56	48	57	35	56	..	60	56	..	..	60	45
Louisiana.....	32	..	..	56	..	..	32	..	..	60	..	..	..	..	..
Arkansas	48	52	80	56	50	57	32	60	56	60	50	..	60	60	45
Tennessee	48	50	..	56	50	56	32	60	56	60	..	..	60	..	45
Kentucky.....	48	52	..	56	50	57	33	56	56	60	50	..	60	60	45
Ohio	48	50	..	56	..	..	32	60	56	60	..	..	60	60	45
Michigan	48	48	80	56	..	54	32	60	56	60	56	58	60	60	45
Indiana.....	48	50	70	56	50	48	32	60	56	60	50	..	60	60	..
Illinois	48	52	..	56	48	57	32	60	56	60	50	..	60	60	..
Wisconsin	48	50	..	56	..	..	32	60	56	60	..	..	..	60	..
Minnesota	48	42	..	56	..	..	32	60	56	60	..	..	..	60	..
Iowa	48	52	..	56	..	57	33	60	56	60	50	..	60	60	45
Missouri.....	48	52	..	56	..	57	32	60	56	60	50	..	60	60	45
Kansas	50	50	..	56	50	57	32	60	56	60	50	55	60	..	45
Nebraska.....	48	52	..	56	50	57	34	60	56	60	50	55	60	60	45
California.....	50	40	..	52	..	..	32	..	54	60	..	..	..	..	..
Oregon	46	42	..	56	..	..	36	60	56	60	..	..	..	60	..

INTEREST TABLE.

FOUR PER CENT.

TIME.	\$1	\$2	\$3	\$4	\$5	\$6	\$7	\$8	\$9	\$10	\$100	\$1000
1 Dy.	0	0	0	0	0	0	0	0	0	0	1	11
3 "	0	0	0	0	0	0	0	0	0	1 1/2	3 1/2	33
5 "	0	0	0	0	0	0	0	1/2	1/2	1 1/2	5 1/2	56
10 "	0	0	0	1/2	1/2	1/2	1	1	1	1	11	1 11
1 Mo.	0	1/2	1	1 1/2	1 1/2	2	2 1/2	2 1/2	3	3 1/2	33	3 33
2 "	1/2	1 1/2	2	2 1/2	3 1/2	4	4 1/2	5 1/2	6	6 1/2	67	6 67
3 "	1	2	3	4	5	6	7	8	9	10	1 00	10 00
4 "	1 1/2	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	1 33	13 33
5 "	1 1/2	3 1/2	5	6 1/2	8 1/2	10	11 1/2	13 1/2	15	16 1/2	1 67	16 67
6 "	2	4	6	8	10	12	14	16	18	20	2 00	20 00
7 "	2 1/2	4 1/2	7	9 1/2	11 1/2	14	16 1/2	18 1/2	21	23 1/2	2 33	23 33
8 "	2 1/2	5 1/2	8	10 1/2	13 1/2	16	18 1/2	21 1/2	24	26 1/2	2 67	26 67
9 "	3	6	9	12	15	18	21	24	27	30	3 00	30 00
10 "	3 1/2	6 1/2	10	13 1/2	16 1/2	20	23 1/2	26 1/2	30	33 1/2	3 33	33 33
11 "	3 1/2	7 1/2	11	14 1/2	18 1/2	22	25 1/2	29 1/2	33	36 1/2	3 67	36 67
1 Yr.	4	8	12	16	20	24	28	32	36	40	4 00	40 00

FIVE PER CENT.

TIME.	\$1	\$2	\$3	\$4	\$5	\$6	\$7	\$8	\$9	\$10	\$100	\$1000
1 Dy.	0	0	0	0	0	0	0	0	0	0	1	14
3 "	0	0	0	0	0	0	0	0	0	0	4	42
5 "	0	0	0	0	0	0	0	1	1	1	7	69
10 "	0	0	0	1/2	1	1	1	1	1	1 1/2	14	1 39
1 Mo.	1/2	1	1	2	2	3	3	3	4	4	42	4 17
2 "	1	1 1/2	3	3	4	5	6	7	8	8	83	8 33
3 "	1	2 1/2	4	5	6	8	9	10	11	13	1 25	12 50
4 "	1 1/2	3	5	7	8	10	12	13	15	17	1 67	16 67
5 "	2	4	6	8	10	13	15	17	19	21	2 08	20 83
6 "	2 1/2	5	8	10	13	15	18	20	23	25	2 50	25 00
7 "	3	6	9	12	15	18	20	23	26	29	2 92	29 17
8 "	3	7	10	13	17	20	23	27	30	33	3 33	33 33
9 "	3 1/2	7 1/2	11	15	19	23	26	30	34	38	3 75	37 50
10 "	4	8	13	17	21	25	29	33	38	42	4 17	41 67
11 "	4 1/2	9	14	18	23	28	32	37	41	46	4 58	45 83
1 Yr.	5	10	15	20	25	30	35	40	45	50	5 00	50 00

SIX PER CENT.

TIME.	\$1	\$2	\$3	\$4	\$5	\$6	\$7	\$8	\$9	\$10	\$100	\$1000
1 Dy.	0	0	0	0	0	0	0	0	0	0	2	17
3 "	0	0	0	0	0	0	0	0	0	1	5	50
5 "	0	0	0	0	0	1/2	1	1	1	1	8	83
10 "	0	0	1	1	1	1	1	1	2	2	17	1 67
1 Mo.	1/2	1	2	2	3	3	4	4	5	5	50	5 00
2 "	1	2	3	4	5	6	7	8	9	10	1 00	10 00
3 "	1 1/2	3	5	6	8	9	11	12	14	15	1 50	15 00
4 "	2	4	6	8	10	12	14	16	18	20	2 00	20 00
5 "	2 1/2	5	8	10	13	15	18	20	23	25	2 50	25 00
6 "	3	6	9	12	15	18	21	24	27	30	3 00	30 00
7 "	3 1/2	7	11	14	18	21	25	28	32	35	3 50	35 00
8 "	4	8	12	16	20	24	28	32	36	40	4 00	40 00
9 "	4 1/2	9	14	18	23	27	32	36	41	45	4 50	45 00
10 "	5	10	15	20	25	30	35	40	45	50	5 00	50 00
11 "	5 1/2	11	17	22	28	33	39	44	50	55	5 50	55 00
1 Yr.	6	12	18	24	30	36	42	48	54	60	6 00	60 00

RATE OF INCOME ON STOCKS.

Purchased at the following prices, (par value being \$100), and bearing interest at the following rates.

Paid.	3%	4%	5%	6%	7%	8%	9%
\$50	6 00	8 00	10 00	12 00	14 00	16 00	18 00
55	5 45	7 27	9 09	10 90	12 72	14 55	16 36
60	5 00	6 67	8 33	10 00	11 66	13 33	15 00
65	4 62	6 15	7 69	9 23	10 76	12 30	13 85
70	4 28	5 71	7 14	8 57	10 00	11 42	12 85
75	4 00	5 33	6 66	8 00	9 33	10 66	12 00
80	3 75	5 00	6 25	7 50	8 75	10 00	11 25
85	3 53	4 70	5 88	7 05	8 23	9 41	10 58
90	3 33	4 44	5 55	6 66	7 77	8 88	10 00
91	3 30	4 40	5 49	6 59	7 69	8 79	9 89
92	3 26	4 34	5 43	6 52	7 60	8 70	9 78
93	3 23	4 30	5 38	6 45	7 53	8 60	9 68
94	3 19	4 26	5 32	6 38	7 45	8 51	9 57
95	3 15	4 21	5 26	6 31	7 36	8 42	9 47
96	3 13	4 17	5 21	6 25	7 29	8 33	9 38
97	3 09	4 12	5 15	6 18	7 22	8 25	9 28
98	3 06	4 08	5 10	6 12	7 14	8 16	9 18
99	3 03	4 04	5 05	6 06	7 07	8 08	9 09
101	2 97	3 96	4 95	5 94	6 93	7 92	8 91
102	2 94	3 92	4 90	5 88	6 86	7 84	8 82
103	2 91	3 88	4 85	5 83	6 80	7 77	8 74
104	2 88	3 85	4 81	5 77	6 73	7 69	8 65
105	2 86	3 80	4 76	5 71	6 66	7 61	8 57
106	2 83	3 77	4 72	5 66	6 60	7 55	8 49
107	2 80	3 74	4 67	5 61	6 54	7 48	8 41
108	2 78	3 70	4 63	5 56	6 48	7 41	8 33
109	2 75	3 67	4 59	5 50	6 42	7 34	8 26
110	2 72	3 63	4 54	5 45	6 36	7 27	8 18
115	2 60	3 48	4 34	5 21	6 08	6 95	7 83
120	2 50	3 33	4 16	5 00	5 83	6 66	7 50
130	2 30	3 07	3 84	4 61	5 38	6 15	6 92
140	2 14	2 86	3 57	4 28	5 00	5 71	6 43
150	2 00	2 67	3 33	4 00	4 66	5 33	6 00
160	1 88	2 50	3 12	3 75	4 38	5 00	5 62
170	.	.	.	3 53	4 12	4 70	5 29
180	.	.	.	3 33	3 88	4 44	5 00
190	.	.	.	3 16	3 68	4 21	4 74
200	.	.	.	3 00	3 50	4 00	4 50

RATES OF POSTAGE.

POSTAL CARDS, 1 cent each, go without further charge to all parts of the United States and Canada. Cards for foreign countries (within the Postal Union) 2 cents each. *Postal Cards are unmailable* with any writing or printing on the address side, except the direction, or with anything pasted upon or attached to them.

ALL LETTERS, to all parts of the United States and Canada, 2 cents for each ounce or fraction thereof.

LOCAL, OR "DROP" LETTERS, that is, for the city or town where deposited, 2 cents where the carrier system is adopted, and 1 cent where there is no carrier system.

FIRST CLASS.—Letters and all other written matter, *whether sealed or unsealed*, and all other matter *scaled, nailed, sewed, tied, or fastened in any manner* so that it cannot be easily examined, 2 cents for each ounce or fraction thereof.

SECOND CLASS.—Only for publishers and news-agents; 1 cent per pound.

NEWSPAPERS and Periodicals (regular publications) can be mailed by the public at the rate of 1 cent for each 4 ounces or fraction thereof.

THIRD CLASS.—Printed matter, in *unsealed wrappers only* (all matter inclosed in notched envelopes must pay letter rates), 1 cent for each 2 ounces or fraction thereof, *which must be fully prepaid*. This includes books, circulars, chromos, engravings, handbills, lithographs, music, pamphlets, proof-sheets and manuscript accompanying the same, reproductions by the electric pen, hektograph, metallograph, papyrograph, and, in short, any reproduction upon paper by any process *except handwriting and the copying press*. Limit of weight 4 lbs., except for a single book, which may weigh more.

FOURTH CLASS.—All mailable matter not included in the three preceding classes which is so prepared for mailing as to be *easily withdrawn from the wrapper* and examined, 1 cent per ounce or fraction thereof. Limit of weight, 4 lbs. Full prepayment compulsory.

REFORWARDING.—Letters will be forwarded from one post office to another upon the *written* request of the *person addressed*, without additional postage charge; but unclaimed packages *cannot be returned to the sender* until stamps are furnished to pay the return postage.

PERMISSIBLE WRITING.—No writing is permitted on third or fourth class matter except as follows: The name and address of sender on the outside or inside of package, preceded by the word "from." On the wrapper may also be written the names and number of articles inclosed. The sender is further allowed to mark a word or passage in a book or paper to which he desires to call special attention. He may also write a simple inscription

RATES OF POSTAGE.

or dedication upon the cover or blank leaves of a book or pamphlet. There may be attached to articles of merchandise, by tag or label, a mark, number, name, or letter for purpose of identification. Printed circulars may contain the written name of the sender, or of the addressee, and the date. Any other writing on third or fourth class matter will subject the package to letter rates of postage, and render the sender liable to a fine of ten dollars for each offense. Printed matter may be inclosed with fourth class matter, but the whole package is subject to the rate of 1 cent per ounce or fraction thereof.

POSTAL NOTES.

Upon payment of a fee of 3 cents each, Postal Notes for any amount under Five Dollars may be purchased at any Money-order Office, payable to bearer at any time within three calendar months from the last day of the month during which it was issued; but payable *only* at such Money-order Office as the purchaser may select or at the office of issue.

MONEY ORDERS.

For Orders not exceeding \$5	5 cents.
Exceeding \$5 and not exceeding \$10	8 "
" 10 "	15 "
" 15 "	30 "
" 30 "	40 "
" 40 "	50 "
" 50 "	60 "
" 60 "	70 "
" 70 "	80 "
" 80 "	100 "

When a larger sum than \$100 is required, additional Orders to make it up must be obtained.

FOREIGN POSTAGE.

The rates for letters are for the half ounce or fraction thereof, and those for newspapers for 2 ounces or fraction thereof:—

To Great Britain and Ireland, France, Spain, all parts of Germany, including Austria, Denmark, Switzerland, Italy, Russia, Norway, Sweden, Turkey (European and Asiatic), Egypt, letters 5 cents, newspapers 1 cent for each 2 ounces or fraction thereof.

To Australia, letters, via San Francisco (except to New South Wales), 5 cents; via Brindisi, 15 cents; newspapers, via San Francisco, 2 cents; via Brindisi, 4 cents. China, letters, via San Francisco, 5 cents; via Brindisi, 13 cents; 4 cents for each paper not weighing over 4 ounces. British India, Italian mail, letters 5 cents, newspapers 1 cent for 2 ounces. Japan, letters, via San Francisco, 5 cents; newspapers 1 cent for 2 ounces.

HELP! In case of Accidents.

Drowning. 1. Loosen clothing, if any. 2. Empty lungs of water by laying body on its stomach and lifting it by the middle so that the head hangs down. Jerk the body a few times. 3. Pull tongue forward, using handkerchief, or pin with string, if necessary. 4. Imitate motion of respiration by alternately compressing and expanding the lower ribs, about twenty times a minute. Alternately raising and lowering the arms from the sides up above the head will stimulate the action of the lungs. Let it be done gently but persistently. 5. Apply warmth and friction to extremities. 6. By holding tongue forward, closing the nostrils and pressing the "Adam's apple" back, (so as to close entrance to stomach), direct inflation may be tried. Take a deep breath and breathe it forcibly into the mouth of patient, compress the chest to expel the air, and repeat the operation. 7. **DON'T GIVE UP!** People have been saved after HOURS of patient, vigorous effort. 8. When breathing begins, get patient into a warm bed, give WARM drinks, or spirits in teaspoonfuls, fresh air and quiet.

Burns and Scalds. Cover with Cooking Soda and lay wet cloths over it. Whites of Eggs and Olive Oil. Olive or Linseed Oil, plain, or mixed with Chalk or Whiting.

Lightning. Dash cold water over a person struck.

Sunstroke. Loosen clothing. Get patient into shade and apply ice-cold water to head.

Mad Dog or Snake Bite. Tie cord tight above wound. Suck the wound and cauterize with caustic or white-hot iron at once, or cut out adjoining parts with a sharp knife.

Venomous Insects Stings, &c. Apply weak Ammonia, Oil, Salt Water, or Iodine.

Fainting. Place flat on back; allow fresh air and sprinkle with water.

Tests of Death. Hold mirror to mouth. If living, moisture will gather. Push pin into flesh. If dead the hole will remain, if alive it will close up.

Cinders in the Eye. Roll soft paper up like a lamp lighter and wet the tip to remove, or use a medicine dropper to draw it out. Rub the *other* eye.

Fire in one's Clothing. *Don't run*,—especially not down stairs or out of doors. Roll on carpet, or wrap in woolen rug or blanket. Keep the head down, so as not to inhale flame.

Fire in a Building. Crawl on the floor. The clearest air is the lowest in the room. Cover head with a woolen wrap, wet if possible. Cut holes for the eyes. Don't get excited

Fire in Kerosene. *Don't use water*, it will spread the flames. Dirt, sand or flour is the best extinguisher; or smother with woolen rug, table-cloth or carpet.

ANTIDOTES FOR POISONS.

First. Send for a Physician.

Second. INDUCE VOMITING, by tickling throat with feather or finger. Drinking hot water or strong Mustard and water. Swallow Sweet Oil or whites of Eggs.

Acids are antidotes for ALKALIES, and *vice versa*.

SPECIAL POISONS AND ANTIDOTES.

Acids. MURIATIC, OXALIC. } Soap-suds, Magnesia,
ACETIC. SULPHURIC (Oil of Vit- } Lime-water.
riol). NITRIC (Aqua Fortis).

Prussic Acid. } Ammonia in water. Dash water
in face.

Carbolic Acid. Flour and water, mucilaginous drinks.

Alkalies. POTASH. LYE. } Vinegar or Lemon juice in
HARTSHORN. AMMONIA. } water.

Arsenic. }
Rat Poison. } Milk, Raw Eggs, Sweet Oil, Lime-
Paris Green. } water, Flour and water.

Bug Poison. }
Lead. }
Saltpetre. } Whites of Eggs or Milk in
Corrosive Sublimate. } large doses.
Sugar of Lead. }
Blue Vitriol. }

Chloroform. } Dash cold water on head and chest.
Chloral. } Artificial respiration. Piece of ice in
Ether. } rectum.

Carbonate of Soda. } Soap-suds and mucilaginous
Copperas. } drinks.
Cobalt. }

Iodine. }
Antimony. } Starch and water. Astringent infu-
Tartar Emetic. } sions. Strong tea.

Mercury AND ITS SALTS. } Whites of Eggs. Milk.
Mucilages.

Nitrate of Silver. }
Lunar Caustic. } Salt and water.

Opium. }
Morphine. } Strong coffee, hot bath. Keep
Laudanum. } awake and moving at any
Paregoric. } cost.
Soothing Powders
or Syrups. }

Strychnine. } Mustard and water, Sul-
Tinct. of Nux Vomica. } phate of Zinc. Absolute
quiet. Plug the ears.

POPULATION OF THE UNITED STATES.

The official count of the returns of the Eleventh
Census as finally determined.

STATES AND TERRITORIES.	1890.	1880.
Alabama.....	1,513,017	1,262,505
Alaska.....	.....	.....
Arizona.....	59,620	40,440
Arkansas.....	1,128,179	802,525
California.....	1,208,130	864,694
Colorado.....	412,198	194,327
Connecticut.....	746,258	622,700
Delaware.....	168,493	146,608
District of Columbia.....	230,392	177,624
Florida.....	391,422	269,493
Georgia.....	1,837,353	1,542,180
Idaho.....	84,385	32,610
Illinois.....	3,826,351	3,077,871
Indiana.....	2,192,404	1,978,301
Indian Territory.....	.....	.....
Iowa.....	1,911,896	1,624,615
Kansas.....	1,427,096	996,096
Kentucky.....	1,858,635	1,648,690
Louisiana.....	1,118,587	939,946
Maine.....	661,086	648,936
Maryland.....	1,042,390	934,943
Massachusetts.....	2,238,943	1,783,085
Michigan.....	2,093,889	1,636,937
Minnesota.....	1,301,826	780,773
Mississippi.....	1,289,600	1,131,597
Missouri.....	2,679,184	2,168,380
Montana.....	132,159	39,159
Nebraska.....	1,058,910	452,402
Nevada.....	45,761	62,266
New Hampshire.....	376,530	346,991
New Jersey.....	1,444,933	1,131,116
New Mexico.....	153,593	119,565
New York.....	5,997,853	5,082,871
North Carolina.....	1,617,947	1,399,750
North Dakota.....	182,719	36,909
Ohio.....	3,672,316	3,198,062
Oklahoma.....	61,834	.....
Oregon.....	313,767	174,768
Pennsylvania.....	5,258,014	4,282,891
Rhode Island.....	345,506	276,531
South Carolina.....	1,151,149	995,577
South Dakota.....	328,808	98,268
Tennessee.....	1,767,518	1,542,359
Texas.....	2,235,523	1,591,749
Utah.....	207,905	143,963
Vermont.....	332,422	332,286
Virginia.....	1,655,980	1,512,565
Washington.....	349,390	75,116
West Virginia.....	762,794	618,457
Wisconsin.....	1,686,880	1,315,497
Wyoming.....	60,705	20,789
Total population of U. S. . .	62,622,250	50,155,783

POPULATION OF PRINCIPAL CITIES.

	1890.	1880.
Albany, N. Y.....	94,923	90,758
Allegheny, Pa.	105,287	78,682
Atlanta, Ga.....	65,533	37,409
Baltimore, Md.	434,439	332,313
Boston, Mass.....	448,477	362,839
Brooklyn, N. Y.....	806,343	566,663
Buffalo, N. Y.....	255,664	155,134
Cambridge, Mass.....	70,028	52,669
Camden, N. J.	58,313	41,659
Charleston, S. C.	54,955	49,984
Chicago, Ill.....	1,099,850	503,185
Cincinnati, O.	296,908	255,139
Cleveland, O.	261,353	160,146
Columbus, O.	88,150	51,647
Dayton, O.....	61,220	38,678
Denver, Col.	106,713	35,629
Des Moines, Ia.	50,093	22,408
Detroit, Mich.....	205,876	116,340
Evansville, Ind.	50,756	29,280
Fall River, Mass.....	74,398	48,961
Grand Rapids, Mich.....	60,278	32,016
Hartford, Conn.....	53,230	42,015
Indianapolis, Ind.	105,436	75,056
Jersey City, N. J.	163,003	120,722
Kansas City, Mo.....	132,716	55,785
Lincoln, Neb.	55,154	13,003
Louisville, Ky.	161,129	123,758
Lowell, Mass.....	77,696	59,475
Lynn, Mass.	55,727	38,274
Memphis, Tenn.....	64,495	33,592
Milwaukee, Wis.....	204,468	115,587
Minneapolis, Minn.....	164,738	46,887
Nashville, Tenn.....	76,168	43,350
Newark, N. J.	181,830	136,508
New Haven, Conn.....	81,298	62,882
New Orleans, La.	242,039	216,090
New York, N. Y.....	1,515,301	1,206,299
Omaha, Neb.....	140,452	30,518
Paterson, N. J.....	78,347	51,031
Philadelphia, Pa.	1,046,964	847,170
Pittsburgh, Pa.	238,617	156,389
Providence, R. I.....	132,146	104,857
Reading, Pa.	58,661	43,278
Richmond, Va.	81,388	63,600
Rochester, N. Y.....	133,896	89,366
Saint Joseph, Mo.	52,324	32,431
Saint Louis, Mo.	451,770	350,518
Saint Paul, Minn.....	133,156	41,473
San Francisco, Cal.	298,997	233,959
Scranton, Pa.....	75,215	45,850
Syracuse, N. Y.	88,143	51,792
Toledo, O.	81,434	50,137
Trenton, N. J.	57,458	29,910
Troy, N. Y.....	60,956	56,747
Washington, D. C.	230,392	177,624
Wilmington, Del.	61,431	42,478
Worcester, Mass.....	84,655	58,291

RELATIVE RANK OF CITIES.

In 1870 there were but fourteen cities each containing more than 100,000 inhabitants. In 1880 this number had increased to twenty, and in 1890 to twenty-eight.

In 1880 there was but one city, New York, which had a population in excess of a million. In 1890 there were three, New York, Chicago, and Philadelphia.

The number and relative rank of cities having a population of 100,000 or more at the date of each of these censuses are set forth in the following table.

	RANK.		
	1890.	1880.	1870.
New York, N. Y.	1	1	1
Chicago, Ill.	2	4	5
Philadelphia, Pa.	3	2	2
Brooklyn, N. Y.	4	3	3
Saint Louis, Mo.	5	6	4
Boston, Mass.	6	5	7
Baltimore, Md.	7	7	6
San Francisco, Cal.	8	9	10
Cincinnati, O.	9	8	8
Cleveland, O.	10	11	..
Buffalo, N. Y.	11	13	11
New Orleans, La.	12	10	9
Pittsburgh, Pa.	13	12	..
Washington, D. C.	14	14	12
Detroit, Mich.	15	18	..
Milwaukee, Wis.	16	19	..
Newark, N. J.	17	15	13
Minneapolis, Minn.	18	..	..
Jersey City, N. J.	19	17	..
Louisville, Ky.	20	16	14
Omaha, Neb.	21	..	..
Rochester, N. Y.	22	..	..
Saint Paul, Minn.	23	..	..
Kansas City, Mo.	24	..	..
Providence, R. I.	25	20	..
Denver, Col.	26	..	..
Indianapolis, Ind.	27	..	..
Allegheny City, Pa.	28	..	..

VALUES IN UNITED STATES MONEY

OF THE

PURE GOLD OR SILVER

REPRESENTING RESPECTIVELY THE MONETARY UNITS AND STANDARD COINS OF FOREIGN COUNTRIES.

The first section of the Act of March 3, 1873, provides "that the value of Foreign Coin, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the values of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the first day of January by the Secretary of the Treasury."

The estimates of values contained in the following table are those made by the Director of the Mint, January 1st, 1890, in compliance with the above stated provisions of law.

COUNTRY.	MONETARY UNIT.	STANDARD.	VALUE.		
			D.	C.	M.
Argentine Repub.	Peso	Gold & silv.	0	96	5
Austria	Florin	Silver	0	34	3
Belgium	Franc	Gold & silv.	0	19	3
Bolivia	Boliviano	Silver	0	69	8
Brazil	Milreis of 1000 reis.	Gold	0	54	6
British America	Dollar	Gold	1	00	0
Cent'l Am. States	Peso	Silver	0	69	8
Chili	Peso	Gold & silv.	0	91	2
China	Tael.. { Shanghai.. Haikwan.. (Customs).	Silver	1	3	1
			1	14	8
Cuba	Peso	Gold & silv.	0	92	6
Denmark	Crown	Gold	0	26	8
Ecuador	Sucre	Silver	0	69	8
Egypt	Pound (100 piastres)	Gold	4	94	3
France	Franc	Gold & silv.	0	19	3
German Empire ..	Mark	Gold	0	23	8
Great Britain	Pound sterling	Gold	4	86	6½
Greece	Drachma	Gold & silv.	0	19	3
Hayti	Gourde	Gold & silv.	0	96	5
India	Rupee of 16 annas.	Silver	0	33	2
Italy	Lira	Gold & silv.	0	19	3
Japan	Yen	Gold	0	99	7
Japan	Yen	Silver	0	75	2
Liberia	Dollar	Gold	1	00	0
Mexico	Dollar	Silver	0	75	8
Netherlands	Florin	Gold & silv.	0	40	2
Norway	Crown	Gold	0	26	8
Peru	Sol	Silver	0	69	8
Portugal ..	Milreis of 1000 reis.	Gold	1	80	0
Russia	Roubl. of 100 cop'ks	Silver	0	55	8
Spain	Peseta of 100 centim.	Gold & silv.	0	19	3
Sweden	Crown	Gold	0	26	8
Switzerland	Franc	Gold & silv.	0	19	3
Tripoli	Mahbub of 20 piast's	Silver	0	62	9
Turkey	Piastre	Gold	0	4	4
U. S. of Colombia	Peso	Silver	0	69	8
Venezuela	Bolivar	Silver	0	14	0

LEGAL HOLIDAYS.

NOTE.—Sunday, July 4 and December 25 are legal holidays in all the States. Other holidays in the different States are noted below:

In most of the States when the holiday falls on Sunday the Monday following is the holiday. Notes must be paid on the Saturday preceding.

ALABAMA—Jan. 1, Feb. 22.

ARIZONA—Jan. 1, Feb. 22, May 30, any day of thanksgiving or general territorial election, or special election called by the Governor.

CALIFORNIA—Jan. 1, Feb. 22, May 30, Sept. 9, Thanksgiving, a State or general election.

COLORADO—Jan. 1, Feb. 22, May 30, Thanksgiving.

CONNECTICUT—Jan. 1, Feb. 22, May 30, Sept. 1, Thanksgiving, Fast day.

DELAWARE—Jan. 1, Feb. 22, Thanksgiving.

FLORIDA—Jan. 1, Feb. 22, any general election day, Thanksgiving.

GEORGIA—Jan. 1, Feb. 22, April 26, any Thanksgiving.

IDAHO—Same as Arizona.

ILLINOIS—Jan. 1, Feb. 22, May 30, Election Day, Thanksgiving.

INDIANA—Jan. 1, public fast, Thanksgiving.

IOWA—Jan. 1, May 30, Thanksgiving.

KANSAS—Jan. 1, May 30, public fast, Thanksgiving.

KENTUCKY—Jan. 1, Feb. 22, public fast, Thanksgiving.

LOUISIANA—Jan. 1 and 8, Feb. 22, Mardi Gras, March 4 in New Orleans, and Good Friday.

MAINE—Jan. 1, Feb. 22, May 30, public fast, Thanksgiving.

MARYLAND—Jan. 1, Good Friday, Feb. 22, Thanksgiving, or general and Congressional election days.

MASSACHUSETTS—Feb. 22, Fast day, May 30, first Monday in Sept., Thanksgiving.

MICHIGAN—Jan. 1, Feb. 22, May 30, and any day appointed by the Governor or President for fasting and thanksgiving.

MINNESOTA—Jan. 1, Feb. 22. Good Friday, Thanksgiving.

MISSISSIPPI—Jan. 1.

MISSOURI—Jan. 1, Feb. 22, any general or State election day, any Thanksgiving day.

MONTANA—Jan. 1, Feb. 22, May 30, public fast, and Thanksgiving.

NEBRASKA—Jan. 1, Feb. 22, April 22, May 30, Sept. 1, public fast and Thanksgiving.

NEVADA—Jan. 1, Feb. 22, and Thanksgiving day.

NEW HAMPSHIRE—Feb. 22, Fast day, May 30, Thanksgiving, or any day on which a general election is held for members of the Legislature.

LEGAL HOLIDAYS.—CONTINUED.

NEW JERSEY—Jan. 1, Feb. 22, May 30, Sept. 1, Thanksgiving day, and any general election day for members of the Assembly. When these fall on Monday notes and drafts are payable on Tuesday; and when they fall on Sunday the Monday following is a legal holiday, and bills become due the Tuesday following.

NEW MEXICO—Jan. 1 and all days for fasting or thanksgiving. Notes due on holidays are payable on the next business day thereafter.

NEW YORK—Jan. 1, Feb. 22, May 30, the first Monday of Sept. (Labor day), any general election day, every Saturday from noon until midnight, which is designated a half holiday, and any day appointed or recommended by the Governor or President as a day of thanksgiving, or fasting and prayer, or other religious observance.

NORTH CAROLINA—Jan. 1, Feb. 22, May 10, May 20, Thanksgiving. When legal holidays are on Sunday the Monday following is a holiday, and notes due on that day are payable on Tuesday. But when the holiday is on Saturday, notes due on Sunday following are payable on Monday.

NORTH DAKOTA—Jan. 1, Feb. 22, May 30, Thanksgiving, public fast, and general State or National election.

OHIO—Jan. 1, Feb. 22, May 30, Thanksgiving.

OREGON—Jan. 1, Feb. 22, May 30, first Saturday in June, public fast, Thanksgiving, and every general election day.

PENNSYLVANIA—Jan. 1, Feb. 22, Good Friday, Sept. 1, Thanksgiving, Decoration Day. But if the latter falls on Sunday the Saturday preceding is to be observed as the holiday; and notes falling due on that day or the Sunday must be paid on Friday, or protested on that day.

RHODE ISLAND—Feb. 22, May 30, Thanksgiving.

SOUTH CAROLINA—Jan. 1, Feb. 22, National Thanksgiving, general election days.

SOUTH DAKOTA—See North Dakota.

TENNESSEE—Jan. 1, Thanksgiving.

TEXAS—Jan. 1, Feb. 22, March 2, April 21, and all days appointed by the President or the Governor as days of fasting or thanksgiving, and every State election day.

UTAH—Jan. 1, Feb. 22, May 30, July 24, and Thanksgiving and Fast days.

VERMONT—Jan. 1, May 30, Thanksgiving.

VIRGINIA—Jan. 1, Feb. 22, Fast day, Thanksgiving.

WASHINGTON—Jan. 1, Feb. 22, Decoration Day, Thanksgiving, days of general and special election for State and National officers.

WEST VIRGINIA—Jan. 1, Feb. 22, or a day of National thanksgiving.

WISCONSIN—Jan. 1, Feb. 22, May 30, June 10, Thanksgiving, general election day.

WYOMING—Jan. 1, Feb. 22, May 30, Thanksgiving.

INTEREST LAWS OF ALL THE STATES.

STATES AND TERRITORIES.	PENALTY OF USURY.	Legal.	Special.
Alabama	Loss of interest	8	.....
Arizona	No Penalty	10	No limit.
Arkansas	Forfeiture of principal & interest.	6	10 per ct.
California	No penalty	7	No limit.
Colorado	No penalty	10	No limit.
Connecticut....	No penalty	6	6 per ct.
Dakota	Forfeiture of contract	7	12 per ct.
Delaware.....	Forfeiture of contract	6	6 per ct.
District of Col..	Forfeiture of all interest.....	6	10 per ct.
Florida	No penalty	8	No limit.
Georgia	Forfeiture of excess	7	8 per ct.
Idaho.....	Forf'ture of 3 times excess of int.	10	18 per ct.
Illinois	Forfeiture of all interest.....	6	8 per ct.
Indiana	Forfeiture of int. over 6 per cent.	6	8 per ct.
Iowa.....	Forfeiture of interest and costs .	6	10 per ct.
Kansas	Forfeiture of excess over 12 per ct.	7	12 per ct.
Kentucky	Forfeiture of excess	6	6 per ct.
Louisiana	Forfeiture of interest	5	8 per ct.
Maine	No penalty	6	No limit.
Maryland	Forfeiture of excess	6	6 per ct.
Massachusetts .	No penalty—6 per ct. on judg'ts.	6	No limit.
Michigan	Forfeiture of excess	7	10 per ct.
Minnesota.....	Forfeiture of contract.	7	10 per ct.
Mississippi	Forfeiture of all interest.....	6	10 per ct.
Missouri	Forfeiture of all interest	6	10 per ct.
Montana	No penalty	10	No limit.
Nebraska.....	Forfeiture of all interest & costs.	7	10 per ct.
Nevada.....	No penalty	10	No limit.
New Hampshire	Forfeiture of 3 times excess of int.	6	6 per ct.
New Jersey	Forfeiture of all interest.....	6	6 per ct.
New Mexico ...	No penalty	6	12 per ct.
New York.....	Forfeiture of contract.*	6	6 per ct.
North Carolina.	Forfeiture of double am't of int.	6	8 per ct.
Ohio	Forfeiture of excess.	6	8 per et.
Oregon	Forfeiture of prin., int. & costs..	8	10 per ct.
Pennsylvania ..	Forfeiture of excess, Act of 1858.	6	6 per ct.
Rhode Island ..	Forfeiture, unless by contract.†.	6	No limit.
South Carolina.	Forfeiture of interest	7	10 per ct.
Tennessee	Forfeiture of over 6 per cent.....	6	6 per ct.
Texas	Forfeiture of interest.....	8	12 per et.
Utah	No penalty	10	No limit.
Vermont	Forfeiture of excess	6	7 per ct.
Virginia.....	Forfeiture of excess	6	6 per ct.
Washington....	No penalty	10	No limit.
West Virginia..	Forfeiture of excess	6	6 per ct.
Wisconsin.....	Forfeiture of all interest	7	10 per ct.
Wyoming	No penalty	12	No limit.

* Also punishable as a misdemeanor. Banks forfeit interest only, or double the interest if charged in advance.
† Also 6 per cent. on judgments.

PRESIDENTS OF THE UNITED STATES.

No.	NAMES.	Born.	Inaugurated.	Term of Office.	Died.	Native of	Residence when elected.	Political Party.
1	GEORGE WASHINGTON	Feb. 22, 1732	April 30, 1789	8 years.....	Dec. 14, 1799	Virginia.	Virginia.	Federal.
2	JOHN ADAMS.....	Oct. 31, 1735	Mar. 4, 1797	4 "	July 4, 1826	Mass.	Mass.	"
3	THOMAS JEFFERSON...	April 2, 1743	" 4, 1801	8 "	" 4, 1826	Virginia.	Virginia.	Republican.
4	JAMES MADISON.....	Mar. 16, 1751	" 4, 1809	8 "	June 28, 1836	"	"	"
5	JAMES MONROE.....	April 28, 1758	" 4, 1817	8 "	July 4, 1831	Mass.	Mass.	Coalition.
6	JOHN QUINCY ADAMS.	July 11, 1767	" 4, 1825	4 "	Feb. 23, 1848	Tennessee.	Tennessee.	Democrat.
7	ANDREW JACKSON	Mar. 15, 1767	" 4, 1829	8 "	June 8, 1845	New York.	New York.	"
8	MARTIN VAN BUREN.	Dec. 5, 1782	" 4, 1837	4 "	July 24, 1862	Virginia.	Ohio.	Whig.
9	WM. H. HARRISON ...	Feb. 9, 1773	" 4, 1841	1 month	April 4, 1841	"	Virginia.	"
10	JOHN TYLER.....	Mar. 29, 1790	April 6, 1841	3 yrs. 11 mos.	Jan. 18, 1862	N. Carolina.	Tennessee.	Democrat.
11	JAMES K. POLK	Nov. 2, 1795	Mar. 4, 1845	4 years.....	June 15, 1849	Virginia.	Louisiana.	Whig.
12	ZACHARY TAYLOR....	Sept. 24, 1784	" 4, 1849	1 year 4 mos..	July 9, 1850	New York.	New York.	"
13	MILLARD FILLMORE ..	Feb. 7, 1800	July 9, 1850	2 years 8 mos.	Mar. 7, 1874	N. Hamp.	N. Hamp.	Democrat.
14	FRANKLIN PIERCE....	Nov. 23, 1804	Mar. 4, 1853	4 years.....	Oct. 8, 1869	Penn.	Penn.	"
15	JAMES BUCHANAN....	April 23, 1791	" 4, 1857	4 "	June 1, 1868	Kentucky.	Illinois.	Republican.
16	ABRAHAM LINCOLN...	Feb. 12, 1809	" 4, 1861	4 yrs. 40 days.	April 15, 1865	N. Carolina.	Tennessee.	"
17	ANDREW JOHNSON....	Dec. 29, 1808	April 15, 1865	3 yrs. 10½ mos.	July 31, 1875	Ohio.	Illinois.	"
18	ULYSSES S. GRANT....	April 27, 1822	Mar. 4, 1869	8 years.....	July 23, 1885	"	Ohio.	"
19	RUTHERF'D B. HAYES	Oct. 4, 1822	" 5, 1877	4 " .....	.....	"	"	"
20	JAMES A. GARFIELD..	Nov. 19, 1831	" 4, 1881	6½ months....	Sept. 19, 1881	Vermont.	New York.	Democrat.
21	CHESTER A. ARTHUR.	Oct. 5, 1830	Sept. 20, 1881	3 yrs. 5½ mos.	Nov. 18, 1886	New Jersey.	"	"
22	GROVER CLEVELAND..	Mar. 18, 1837	Mar. 4, 1885	4 years.....	.....	Ohio.	Indiana.	Republican.
23	BENJAMIN HARRISON.	Aug. 20, 1833	" 4, 1889	.....	.....	.....	.....	.....

STANDARD TIME.

In this Almanac the risings and settings of the Sun and Moon are given in local mean time, as heretofore. The Tides are given in STANDARD TIME.

To change to STANDARD TIME add or subtract the minutes as given below, according as they are marked *plus* or *minus*.

Standard Time Divisions as adopted by the Railroads.

EASTERN STANDARD—75th Meridian. Canada, between Quebec and Detroit,—U. S. east of Buffalo, N. Y.; Pittsburg, Pa.; Wheeling and Huntington, W. Va.; Bristol, Tenn.; Charlotte, N. C., and Augusta, Ga.

CENTRAL STANDARD—90th Meridian. West from "Eastern" limits, as above, to Broadview, Canada; to the Missouri River in Dakota; North Platte and McCook, Nebraska; Wallace and Dodge City, Kansas; Toyah and Sanderson, Texas.

MOUNTAIN STANDARD—105th Meridian. West from "Central" limits to Heron, Montana; Ogden, Utah; Needles and Yuma, Arizona.

PACIFIC STANDARD—120th Meridian. West from "Mountain" limits to coast.

Correction for the following Cities.

Eastern Standard.		Central Standard.	
75° Longitude.		90° Longitude.	
	Minutes.		Minutes.
Bangor, Me.	— 25	Cleveland, Ohio	— 33
Augusta, Me.	— 21	Columbus, Ohio	— 28
Portland, Me.	— 19	Detroit, Mich.	— 28
Boston, Mass.	— 16	Toledo, Ohio.	— 26
Newport, R. I.	— 15	Dayton, Ohio	— 23
Providence, R. I.	— 14	Cincinnati, Ohio.	— 22
Concord, N. H.	— 14	Louisville, Ky.	— 18
New London, Conn. —	11	Indianapolis, Ind.	— 16
Springfield, Mass. ...	— 10	Chicago, Ill.	— 10
Montpelier, Vt.	— 10	Milwaukee, Wis.	— 8
Hartford, Conn.	— 9	Springfield, Ill.	— 2
Montreal, Que.	— 6	Memphis, Tenn.	0
Albany, N. Y.	— 5	New Orleans, La. ...	0
New York, N. Y. ...	— 4	St. Louis, Mo.	+ 1
Utica, N. Y.	+ 1	Rock Island, Ill.	+ 3
Philadelphia, Pa.	+ 1	Dubuque, Iowa	+ 3
Syracuse, N. Y.	+ 5	Burlington, Iowa	+ 5
Baltimore, Md.	+ 6	St. Paul, Minn.	+ 12
Washington, D. C. ...	+ 8	Des Moines, Iowa. ...	+ 14
Rochester, N. Y.	+ 11	Kansas City, Mo.	+ 18
Buffalo, N. Y.	+ 16	Galveston, Texas	+ 19
Pittsburg, Pa.	+ 20	Omaha, Neb.	+ 24
Mountain Standard.		Pacific Standard.	
105° Longitude.		120° Longitude.	
Denver, Col.	0	Sacramento, Cal.	+ 6
Salt Lake City, Utah, +	28	San Francisco, Cal. ...	+ 10

HIGH TIDE.

(STANDARD TIME.)

Day of Mo.	JANUARY.		FEBRUARY.		MARCH.	
	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.
	Morning.	Morning.	Morning.	Morning.	Morning.	Morning.
1	10 11	7 8	11 45	8 41	10 40	7 35
2	11 9	8 3	0 7	9 27	11 20	8 14
3	.....	9 0	0 49	10 7	11 58	8 56
4	0 28	9 51	1 29	10 43	0 15	9 32
5	1 17	10 36	2 7	11 20	0 52	10 8
6	2 3	11 19	2 45	.....	1 28	10 41
7	2 45	.....	3 23	0 22	2 5	11 18
8	3 26	0 24	4 6	1 5	2 44	.....
9	4 9	1 8	4 55	1 54	3 27	0 26
10	4 55	1 54	5 50	2 48	4 17	1 16
11	5 43	2 41	6 50	3 48	5 15	2 14
12	6 34	3 31	7 52	4 48	6 18	3 16
13	7 27	4 24	8 51	5 48	7 24	4 20
14	8 22	5 18	9 46	6 44	8 24	5 20
15	9 16	6 13	10 37	7 31	9 19	6 17
16	10 8	7 5	11 21	8 15	10 10	7 6
17	10 58	7 52	.....	9 0	10 53	7 48
18	11 42	8 38	0 23	9 42	11 34	8 29
19	0 4	9 24	1 4	10 21	.....	9 13
20	0 48	10 6	1 45	11 1	0 36	9 55
21	1 30	10 46	2 28	11 48	1 20	10 39
22	2 13	11 28	3 16	0 14	2 9	11 30
23	2 54	.....	4 12	1 11	3 2	.....
24	3 40	0 39	5 19	2 17	4 3	1 2
25	4 32	1 31	6 31	3 29	5 14	2 12
26	5 32	2 30	7 45	4 42	6 27	3 25
27	6 40	3 37	8 52	5 49	7 36	4 32
28	7 50	4 46	9 49	6 47	8 36	5 34
29	8 59	5 57	.....	.....	9 27	6 25
30	10 2	7 0	.....	.....	10 11	7 8
31	10 58	7 52	.....	.....	10 49	7 44

HIGH TIDE.

(STANDARD TIME.)

Day of Mo.	APRIL.		MAY.		JUNE.	
	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.
	Morning.	Morning.	Morning.	Morning.	Morning.	Morning.
1	11 25	8 19	11 27	8 21	0 2	9 23
2	11 59	8 57	.....	9 2	0 46	10 7
3	0 16	9 33	0 24	9 43	1 32	10 49
4	0 53	10 9	1 6	10 23	2 17	11 36
5	1 32	10 46	1 50	11 7	3 3	0 0
6	2 13	11 30	2 37	11 58	3 50	0 49
7	2 58	.....	3 26	0 24	4 41	1 39
8	3 49	0 48	4 19	1 18	5 34	2 32
9	4 46	1 45	5 16	2 15	6 29	3 27
10	5 48	2 46	6 15	3 13	7 27	4 23
11	6 52	3 49	7 11	4 8	8 25	5 21
12	7 51	4 48	8 5	5 2	9 23	6 21
13	8 45	5 42	8 58	5 55	10 22	7 18
14	9 34	6 33	9 49	6 47	11 20	8 15
15	10 21	7 17	10 40	7 35	.....	9 14
16	11 5	7 59	11 30	8 25	0 45	10 10
17	11 49	8 46	.....	9 23	1 40	11 0
18	0 12	9 36	0 53	10 18	2 31	11 52
19	1 2	10 25	1 51	11 15	3 19	0 17
20	1 58	11 22	2 48	.....	4 8	1 7
21	2 56	.....	3 45	0 44	4 56	1 54
22	3 59	0 58	4 43	1 42	5 46	2 44
23	5 7	2 5	5 40	2 38	6 35	3 32
24	6 11	3 9	6 34	3 31	7 26	4 22
25	7 12	4 9	7 24	4 21	8 15	5 12
26	8 6	5 3	8 10	5 7	9 3	6 1
27	8 53	5 50	8 55	5 52	9 51	6 49
28	9 35	6 33	9 37	6 35	10 40	7 35
29	10 14	7 11	10 19	7 16	11 24	8 18
30	10 51	7 45	11 1	7 54	.....	9 6
31	.....	.....	11 41	8 38	.....	.....

HIGH TIDE.

(STANDARD TIME.)

Day of Mo.	JULY.		AUGUST.		SEPTEMBER.	
	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.
	Morning.	Morning.	Morning.	Morning.	Morning.	Morning.
1	0 29	9 49	1 27	10 42	2 24	11 43
2	1 13	10 29	2 7	11 22	3 12	0 10
3	1 55	11 10	2 48	.....	4 9	1 9
4	2 36	11 54	3 32	0 31	5 19	2 17
5	3 18	0 16	4 26	1 24	6 35	3 33
6	4 4	1 3	5 27	2 25	7 50	4 47
7	4 56	1 54	6 39	3 36	8 55	5 53
8	5 52	2 50	7 53	4 50	9 52	6 50
9	6 54	3 52	9 4	6 2	10 40	7 35
10	8 2	4 59	10 7	7 4	11 20	8 14
11	9 9	6 8	11 1	7 55	11 58	8 55
12	10 14	7 10	11 46	8 43	0 16	9 33
13	11 13	8 8	0 8	9 27	0 53	10 8
14	.....	9 4	0 49	10 6	1 30	10 45
15	0 31	9 54	1 28	10 42	2 10	11 25
16	1 19	10 37	2 7	11 21	2 51	.....
17	2 3	11 19	2 46	.....	3 39	0 38
18	2 45	.....	3 27	0 25	4 33	1 32
19	3 26	0 24	4 13	1 12	5 33	2 31
20	4 10	1 9	5 7	2 5	6 36	3 33
21	4 57	1 55	6 5	3 3	7 38	4 35
22	5 47	2 45	7 8	4 5	8 35	5 32
23	6 42	3 39	8 8	5 5	9 25	6 23
24	7 38	4 35	9 4	6 2	10 10	7 7
25	8 35	5 32	9 55	6 53	10 52	7 46
26	9 29	6 27	10 42	7 37	11 31	8 26
27	10 19	7 16	11 22	8 16	.....	9 9
28	11 6	7 59	.....	8 58	0 32	9 52
29	11 47	8 44	0 19	9 37	1 17	10 37
30	0 8	9 27	0 59	10 16	2 7	11 29
31	0 48	10 6	1 40	10 55	.....	.....

HIGH TIDE.

(STANDARD TIME.)

Day of Mo.	OCTOBER.		NOVEMBER.		DECEMBER.	
	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.	BOST. TIDE.	N. Y. TIDE.
	Morning.	Morning.	Morning.	Morning.	Morning.	Morning.
1	3 3	.....	5 9	2 8	5 38	2 36
2	4 6	1 5	6 12	3 9	6 31	3 28
3	5 18	2 16	7 10	4 7	7 21	4 18
4	6 31	3 28	8 3	5 0	8 9	5 6
5	7 38	4 34	8 50	5 47	8 56	5 54
6	8 35	5 33	9 32	6 30	9 42	6 40
7	9 25	6 23	10 14	7 11	10 26	7 23
8	10 9	7 6	10 54	7 48	11 9	8 4
9	10 49	7 43	11 31	8 26	11 51	8 48
10	11 24	8 19	.....	9 10	0 13	9 34
11	.....	8 58	0 33	9 53	0 57	10 15
12	0 19	9 36	1 17	10 34	1 41	10 57
13	0 58	10 15	2 2	11 20	2 24	11 41
14	1 40	10 56	2 48	.....	3 6	0 4
15	2 25	11 44	3 37	0 36	4 0	0 49
16	3 12	0 10	4 27	1 26	4 37	1 36
17	4 4	1 3	5 21	2 19	5 28	2 26
18	5 2	2 0	6 15	3 13	6 21	3 19
19	6 2	3 0	7 9	4 6	7 20	4 17
20	7 0	3 57	8 1	4 58	8 21	5 17
21	7 55	4 51	8 54	5 51	9 22	6 20
22	8 45	5 43	9 46	6 44	10 24	7 21
23	9 33	6 31	10 40	7 35	11 23	8 17
24	10 18	7 15	11 32	8 27	.....	9 18
25	11 3	7 57	0 0	9 27	0 48	10 13
26	11 48	8 45	0 57	10 23	1 43	11 2
27	0 12	9 35	1 55	11 19	2 32	11 52
28	1 4	10 28	2 53	.....	3 18	0 17
29	2 1	11 25	3 47	0 46	4 6	1 5
30	3 0	.....	4 43	1 42	4 55	1 53
31	4 3	1 2	.....	.....	5 45	2 43

TIDE TABLE

(The following values are derived from late determinations of the UNITED STATES COAST SURVEY.)

To find the time (Standard Time) of High Water at any of the following places, add or subtract the hours and minutes opposite the name of place in the following Table, to or from the hours and minutes of High Water at NEW YORK for the required day, as found in the *Calendar Page*.

EASTERN STANDARD.		H.	M.	Mean range. Feet.
Eastport, Me.	add	2	33	18.2
Bar Harbor, Me.	"	2	27	10.4
Portland, Me.	"	2	55	9.1
Portsmouth, N. H.	"	3	3	8.6
Isle of Shoals, N. H.	"	2	57	8.7
Newburyport, Mass.	"	3	16	7.5
Gloucester, Mass.	"	2	44	8.9
Salem, Mass.	"	2	54	9.2
Nahant, Mass.	"	2	50	9.4
Plymouth, Mass.	"	2	59	10.2
Provincetown, Mass.	"	3	0	9.2
Nantucket, Mass.	"	4	15	3.0
Vineyard Haven, Mass.	"	3	32	1.6
Wood's Hole, North Side, Mass.	sub.	0	21	4.0
Wood's Hole, South Side, Mass.	add	0	14	1.6
New Bedford Entrance (Dumpling Rock), Mass. }	sub.	0	20	3.7
Newport, R. I.	"	0	33	3.9
Point Judith, R. I.	"	0	45	3.1
Sandy Hook, N. J.	"	0	32	4.7
Watch Hill, R. I.	add	0	44	2.7
Stonnington, Conn.	"	0	52	2.7
New London, Conn.	"	1	14	2.6
New Haven, Conn.	"	2	57	6.0
Bridgeport, Conn.	"	3	1	6.5
Montauk Point, L. I.	"	0	4	1.9
Throg's Neck, N. Y.	"	3	12	7.3
Cape May Landing, N. J.	"	0	16	4.8
Newcastle, Del.	"	3	52	6.5
Philadelphia, Penn.	"	5	36	6.0
Annapolis, Md.	sub.	3	19	0.9
Blatimore, Md.	"	1	24	1.3
Richmond, Va.	"	3	25	3.6
Hatteras Inlet, N. C.	"	0	56	2.0
Beaufort, N. C.	"	0	35	2.8
Charleston (C. H. Wharf), S. C.	"	0	19	5.1
CENTRAL STANDARD.				
Fort Pulaski (Savannah Ent.), Ga.	"	1	21	6.9
Savannah (Dry Dock Wharf), Ga.	"	0	26	6.5
St. Augustine, Fla.	"	0	17	4.2
Key West, Fla.	add	0	26	1.2
Tampa Bay (Egmont Key), Fla.	"	2	49	1.4
Cedar Keys (Depot Key), Fla.	"	4	52	2.6

SHORT METHOD

FOR CALCULATING INTEREST.

Multiply the principal by as many hundreds as there are days, and

For 4 per cent.....	Divide by 90
" 5 " "	" " 72
" 6 " "	" " 60
" 7 " "	" " 52
" 8 " "	" " 45
" 9 " "	" " 40
" 10 " "	" " 36
" 12 " "	" " 30

EXAMPLE — INTEREST on \$50 for 30 days at 4%.
 $50 \times .30 = 15.00$, which divided by 90 = $16\frac{2}{3}$ cents — the required result.

FESTIVALS AND FASTS.

Epiphany	Jan. 6
Septuagesima Sunday	Jan. 29
Quinquagesima — Shrove Sunday	Feb. 12
Ash Wednesday	Feb. 15
First Sunday in Lent	Feb. 19
St. Patrick	Mar. 17
Palm Sunday	Mar. 26
Good Friday	Mar. 31
Easter Sunday	April 2
Low Sunday	April 9
Rogation Sunday	May 7
Ascension Day — Holy Thursday	May 11
Pentecost — Whit Sunday	May 21
Trinity Sunday	May 28
Corpus Christi	June 1
St. John Baptist	June 24
Michaelmas Day	Sept. 29
St. Andrew	Nov. 30
First Sunday in Advent	Dec. 3
Christmas Day	Dec. 25

THE SEASONS.

	Eastern Standard.	Central Standard.
Vernal Equinox,	Mar. 20, 4h. M.	Mar. 20, 3h. M.
Summer Solstice,	June 21, 0h. M.	June 20, 11h. A.
Autumnal Equinox,	Sept. 22, 2h. A.	Sept. 22, 1h. A.
Winter Solstice,	Dec. 21, 9h. M.	Dec. 21, 8h. M.
	Mountain Standard.	Pacific Standard.
Vernal Equinox,	Mar. 20, 2h. M.	Mar. 20, 1h. M.
Summer Solstice,	June 20, 10h. A.	June 20, 9h. A.
Autumnal Equinox,	Sept. 22, 0h. A.	Sept. 22, 11h. M.
Winter Solstice,	Dec. 21, 7h. M.	Dec. 21, 6h. M.

ECLIPSES FOR THE YEAR.

IN the year 1893 there will be two Eclipses, — both of the SUN.

I. A TOTAL ECLIPSE OF THE SUN, April 16. Invisible to North America. Visible to South America, the larger part of Africa, southern Europe, and intermediate Atlantic Ocean.

II. AN ANNULAR ECLIPSE OF THE SUN, October 9. Visible to the western halves of North and South America, (including the West Indies,) the extreme north-eastern tip of Asia, and eastern Pacific Ocean. Invisible east of a line drawn through Bismarck, (Dak.), Omaha, Memphis, and Sapelo Island, (Ga.) The path of the annulus being in the Pacific Ocean. Occurring, as a partial Eclipse, as follows: —

	Standard.	Begins.	Ends.	Digits. Eclipsed.
		H. M.	H. M.	
Lawrence, Kan.....	Central	2 2 A.	2 41 A.	Small.
Galveston, Tex.....	"	1 56 A.	3 36 A.	2
San Antonio, Tex.....	"	1 38 A.	3 33 A.	3
Austin, Tex.....	"	1 40 A.	3 31 A.	3
New Orleans, La.....	"	2 27 A.	3 31 A.	1
Mobile, Ala.....	"	2 35 A.	3 25 A.	1
Pensacola, Fla.....	"	2 37 A.	3 25 A.	1
Bismarck, Dak.....	Mountain	0 55 A.	1 18 A.	Slight.
Denver, Col.....	"	0 13 A.	1 56 A.	2
Salt Lake City, Utah ..	"	11 47 M.	1 51 A.	3
Santa Fe, N. Mex.....	"	0 7 A.	2 9 A.	3
Gallatin, Mont....	"	11 55 M.	1 35 A.	2
San Francisco, Cal. ...	Pacific	10 19 M.	0 55 A.	5
Portland, Ore.....	"	10 25 M.	0 37 A.	4
Victoria, V. C. I.....	"	10 26 M.	0 28 A.	3
Los Angeles, Cal.....	"	10 31 M.	1 8 A.	5
San Diego, Cal.....	"	10 33 M.	1 13 A.	6
Monterey, Cal.....	"	10 22 M.	0 59 A.	6
Virginia City, Nev.....	"	10 28 M.	0 54 A.	5

MORNING AND EVENING STARS.

MERCURY will be Evening Star about March 14, July 11, and November 5; and Morning Star about April 28, August 25, and December 14.

VENUS will be Morning Star till May 2; and Evening Star the rest of the year.

JUPITER will be Evening Star till April 27; then Morning Star till November 18; and Evening Star again the rest of the year.

CHRONOLOGICAL CYCLES.

Dominical Letter	A.
Epact	12
Lunar Cycle, or Golden Number	13
Solar Cycle	26
Roman Indiction	6
Julian Period	6606

The Calendars for the Latitude of Boston and Chicago

May be used for Central and Southern New England,
Central New York, Southern Michigan, Southern
Wisconsin, Northern Iowa, Northern Nebraska, South
Dakota, and Wyoming.

The Calendars for the Latitude of New York and Philadelphia

May be used for Southern New York, New Jersey, Penn-
sylvania, Northern Ohio, Northern Indiana, North-
ern Illinois, Southern Iowa, and Southern Nebraska.

The Calendars for the Latitude of Washington, Cincinnati, etc.

May be used for Delaware, Maryland, the Virginias,
Southern Ohio, Southern Indiana, Southern Illinois,
Kentucky, Missouri, Kansas, and Colorado.

THE SIZE OF THE SEAS.

	Miles long.
Mediterranean.....	2,000
Caribbean.....	1,800
Red	1,400
Black	932
Baltic.....	600

AREA OF OCEANS IN SQ. MILES.

Pacific	80,000,000
Atlantic.....	40,000,000
Indian	20,000,000
Southern.....	10,000,000
Arctic.....	5,000,000

SIZE OF THE GREAT LAKES.

	Miles long.	Miles wide.
Superior	380	120
Michigan.....	330	60
Ontario	170	40
Champlain	123	12
Erie	270	50
Huron	250	90
Winnipeg	240	40
Athabaska.....	200	20



MOON'S PHASES. (In Standard Time.)

FULL MOON.....
LAST QUARTER...
NEW MOON.....
FIRST QUARTER..
FULL MOON.....

EAST'N DIVISION.

2d. 8h. 41m. M.
9d. 5h. 28m. A.
17d. 8h. 28m. A.
25d. 1h. 27m. M.
31d. 9h. 11m. A.

CENT. DIVISION.

2d. 7h. 41m. M.
9d. 4h. 28m. A.
17d. 7h. 28m. A.
25d. oh. 27m. M.
31d. 8h. 11m. A.

LATITUDE OF BOSTON AND CHICAGO.

Day.	Day of W'k.	Local Mean Time.	
		SUN R.&S.	MOON R.&S.
1	S	r7 30	6 51
2	Mo.	s4 40	rises.
3	Tu.	r7 30	5 50
4	We.	s4 42	7 5
5	Th.	r7 30	8 18
6	Fr.	s4 44	9 27
7	Sa.	r7 29	10 33
8	S	s4 46	11 36
9	Mo.	r7 29	morn
10	Tu.	s4 48	0 38
11	We.	r7 28	1 40
12	Th.	s4 50	2 43
13	Fr.	r7 28	3 47
14	Sa.	s4 53	4 51
15	S	r7 27	5 52
16	Mo.	s4 55	6 46
17	Tu.	r7 26	sets.
18	We.	s4 57	5 29
19	Th.	r7 24	6 41
20	Fr.	s5 0	7 53
21	Sa.	r7 23	9 4
22	S	s5 2	10 16
23	Mo.	r7 22	11 28
24	Tu.	s5 5	morn
25	We.	r7 21	0 42
26	Th.	s5 7	1 59
27	Fr.	r7 18	3 17
28	Sa.	s5 10	4 32
29	S	r7 16	5 41
30	Mo.	s5 13	6 39
31	Tu.	r7 14	rises.

LAT. OF NEW YORK AND PHILA.

Local Mean Time.	
SUN R.&S.	MOON R.&S.
r7 25	6 44
s4 45	rises.
r7 25	5 56
s4 47	7 10
r7 25	8 21
s4 49	9 29
r7 25	10 34
s4 51	11 35
r7 24	morn
s4 53	0 36
r7 24	1 37
s4 55	2 39
r7 23	3 42
s4 57	4 45
r7 22	5 45
s5 0	6 39
r7 21	sets.
s5 2	5 34
r7 20	6 45
s5 4	7 56
r7 19	9 5
s5 7	10 16
r7 17	11 26
s5 9	morn
r7 16	0 39
s5 11	1 55
r7 14	3 11
s5 14	4 25
r7 13	5 34
s5 16	6 32
r7 11	rises.

LAT. OF WASH. CIN. & ST. LOUIS.

Local Mean Time.	
SUN R.&S.	MOON R.&S.
r7 19	6 37
s4 50	rises.
r7 19	6 3
s4 52	7 16
r7 19	8 26
s4 54	9 32
r7 19	10 36
s4 56	11 36
r7 19	morn
s4 58	0 35
r7 18	1 35
s5 0	2 35
r7 18	3 36
s5 2	4 38
r7 17	5 38
s5 4	6 32
r7 16	sets.
s5 6	5 41
r7 15	6 50
s5 9	8 0
r7 14	9 8
s5 11	10 17
r7 13	11 26
s5 13	morn
r7 12	0 37
s5 15	1 51
r7 10	3 6
s5 18	4 19
r7 9	5 26
s5 20	6 25
r7 7	rises.



MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	8d. 3h. 12m. A.	8d. 2h. 12m. M.
NEW MOON.....	16d. 11h. 16m. M.	16d. 10h. 16m. M.
FIRST QUARTER..	23d. 9h. 14m. M.	23d. 8h. 14m. M.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.		LAT. OF WASH. CIN. & ST. LOUIS.	
Day.	Day of W'k.	Local Mean Time.		Local Mean Time.		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	WE.	r7 13	5 55	r7 10	5 59	r7 6	6 4
2	TH.	s5 17	7 7	s5 20	7 10	s5 24	7 13
3	FR.	r7 11	8 15	r7 8	8 16	r7 4	8 19
4	SA.	s5 19	9 20	s5 22	9 20	s5 26	9 21
5	S	r7 9	10 24	r7 6	10 23	r7 2	10 22
6	MO.	s5 22	11 27	s5 25	11 24	s5 28	11 23
7	TU.	r7 7	morn	r7 3	morn	r7 0	morn
8	WE.	s5 24	0 30	s5 27	0 26	s5 30	0 23
9	TH.	r7 4	1 30	r7 1	1 28	r6 58	1 23
10	FR.	s5 27	2 37	s5 30	2 31	s5 33	2 25
11	SA.	r7 1	3 39	r6 59	3 32	r6 56	3 25
12	S	s5 30	4 37	s5 32	4 30	s5 35	4 22
13	MO.	r6 58	5 29	r6 56	5 22	r6 53	5 15
14	TU.	s5 32	6 12	s5 35	6 6	s5 38	6 0
15	WE.	r6 56	6 48	r6 53	6 43	r6 51	6 38
16	TH.	s5 35	sets.	s5 37	sets.	s5 39	sets.
17	FR.	r6 53	6 51	r6 51	6 53	r6 48	6 56
18	SA.	s5 37	8 3	s5 39	8 3	s5 42	8 5
19	S	r6 50	9 17	r6 48	9 16	r6 46	9 16
20	MO.	s5 40	10 32	s5 42	10 29	s5 44	10 28
21	TU.	r6 47	11 49	r6 45	11 45	r6 43	11 41
22	WE.	s5 42	morn	s5 44	morn	s5 46	morn
23	TH.	r6 44	1 7	r6 42	1 2	r6 40	0 56
24	FR.	s5 45	2 23	s5 47	2 17	s5 48	2 10
25	SA.	r6 41	3 32	r6 39	3 25	r6 38	3 17
26	S	s5 47	4 32	s5 49	4 25	s5 50	4 18
27	MO.	r6 38	5 21	r6 36	5 15	r6 35	5 8
28	TU.	s5 50	5 59	s5 51	5 54	s5 52	5 49
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MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
FULL MOON.....	2d. 11h. 3m. M.	2d. 10h. 3m. M.
LAST QUARTER..	10d. 0h. 13m. A.	10d. 11h. 13m. M.
NEW MOON.....	17d. 11h. 33m. A.	17d. 10h. 33m. A.
FIRST QUARTER.	24d. 4h. 33m. A.	24d. 3h. 33m. A.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.		LAT. OF WASH. CIN. & ST. LOUIS.	
Day.	Day of W'k.	Local Mean Time.		Local Mean Time		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	WE.	r6 35	6 29	r6 33	6 25	r6 32	6 22
2	TH.	s5 52	rises.	s5 53	rises.	s5 54	rises.
3	FR.	r6 32	7 3	r6 30	7 4	r6 29	7 5
4	SA.	s5 54	8 9	s5 55	8 8	s5 57	8 8
5	S	r6 28	9 13	r6 27	9 11	r6 26	9 10
6	MO.	s5 57	10 16	s5 58	10 13	s5 59	10 10
7	TU.	r6 25	11 20	r6 24	11 16	r6 23	11 11
8	WE.	s5 59	morn	s6 0	morn	s6 1	morn
9	TH.	r6 21	0 25	r6 21	0 19	r6 20	0 14
10	FR.	s6 1	1 27	s6 2	1 21	s6 3	1 14
11	SA.	r6 18	2 26	r6 17	2 19	r6 17	2 11
12	S	s6 4	3 20	s6 4	3 13	s6 5	3 5
13	MO.	r6 15	4 6	r6 14	3 59	r6 14	3 53
14	TU.	s6 6	4 45	s6 6	4 39	s6 7	4 33
15	WE.	r6 11	5 17	r6 11	5 12	r6 11	5 8
16	TH.	s6 8	5 44	s6 9	5 41	s6 9	5 39
17	FR.	r6 8	sets.	r6 8	sets.	r6 8	sets.
18	SA.	s6 11	6 58	s6 11	6 58	s6 11	6 58
19	S	r6 4	8 15	r6 4	8 13	r6 5	8 12
20	MO.	s6 13	9 34	s6 13	9 30	s6 13	9 27
21	TU.	r6 1	10 54	r6 1	10 49	r6 2	10 44
22	WE.	s6 15	morn	s6 15	morn	s6 15	morn
23	TH.	r5 57	0 13	r5 58	0 7	r5 58	0 0
24	FR.	s6 17	1 26	s6 17	1 19	s6 16	1 12
25	SA.	r5 54	2 29	r5 54	2 22	r5 55	2 14
26	S	s6 20	3 20	s6 19	3 14	s6 18	3 7
27	MO.	r5 50	4 1	r5 51	3 56	r5 52	3 50
28	TU.	s6 22	4 33	s6 21	4 29	s6 20	4 25
29	WE.	r5 47	4 58	r5 48	4 55	r5 49	4 53
30	TH.	s6 24	5 19	s6 23	5 17	s6 22	5 17
31	FR.	r5 43	5 38	r5 44	5 38	r5 46	5 38



MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
FULL MOON	1d. 2h. 18m. M.	1d. 1h. 18m. M.
LAST QUARTER...	9d. 6h. 35m. M.	9d. 5h. 35m. M.
NEW MOON	16d. 9h. 34m. M.	16d. 8h. 34m. M.
FIRST QUARTER..	23d. 0h. 26m. M.	22d. 11h. 26m. A.
FULL MOON	30d. 6h. 23m. A.	30d. 5h. 23m. A.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.				LAT. OF WASH. CIN. & ST. LOUIS.			
Day.	Day of W'k.	Local Mean Time.		Sun R.&S.	Moon R.&S.	Sun R.&S.	Moon R.&S.	Sun R.&S.	Moon R.&S.	Sun R.&S.	Moon R.&S.
		SUN	MOON								
1	SA.	r5 42	rises.	r5 43	rises.	r5 44	rises.	r5 44	rises.	r5 44	rises.
2	S	s6 28	8 4	s6 26	8 1	s6 25	7 59	s6 25	7 59	s6 25	7 59
3	Mo.	r5 38	9 8	r5 39	9 4	r5 41	9 0	r5 41	9 0	r5 41	9 0
4	Tu.	s6 30	10 12	s6 28	10 7	s6 27	10 1	s6 27	10 1	s6 27	10 1
5	We.	r5 35	11 16	r5 36	11 10	r5 38	11 3	r5 38	11 3	r5 38	11 3
6	Th.	s6 32	morn	s6 30	morn	s6 29	morn	s6 29	morn	s6 29	morn
7	Fr.	r5 31	0 17	r5 33	0 10	r5 35	0 3	r5 35	0 3	r5 35	0 3
8	SA.	s6 34	1 12	s6 33	1 5	s6 31	0 57	s6 31	0 57	s6 31	0 57
9	S	r5 28	2 0	r5 30	1 53	r5 32	1 46	r5 32	1 46	r5 32	1 46
10	Mo.	s6 36	2 41	s6 35	2 35	s6 33	2 29	s6 33	2 29	s6 33	2 29
11	Tu.	r5 25	3 15	r5 27	3 10	r5 29	3 5	r5 29	3 5	r5 29	3 5
12	We.	s6 39	3 43	s6 37	3 39	s6 35	3 36	s6 35	3 36	s6 35	3 36
13	Th.	r5 21	4 8	r5 24	4 6	r5 26	4 4	r5 26	4 4	r5 26	4 4
14	Fr.	s6 41	4 31	s6 39	4 30	s6 37	4 30	s6 37	4 30	s6 37	4 30
15	SA.	r5 18	4 54	r5 20	4 54	r5 23	4 56	r5 23	4 56	r5 23	4 56
16	S	s6 43	sets.	s6 41	sets.	s6 38	sets.	s6 38	sets.	s6 38	sets.
17	Mo.	r5 15	8 29	r5 17	8 25	r5 20	8 20	r5 20	8 20	r5 20	8 20
18	Tu.	s6 44	9 53	s6 43	9 47	s6 40	9 41	s6 40	9 41	s6 40	9 41
19	We.	r5 12	11 12	r5 14	11 5	r5 17	10 58	r5 17	10 58	r5 17	10 58
20	Th.	s6 48	morn	s6 45	morn	s6 42	morn	s6 42	morn	s6 42	morn
21	Fr.	r5 9	0 21	r5 11	0 14	r5 14	0 6	r5 14	0 6	r5 14	0 6
22	SA.	s6 50	1 18	s6 47	1 11	s6 44	1 4	s6 44	1 4	s6 44	1 4
23	S	r5 6	2 2	r5 9	1 56	r5 12	1 50	r5 12	1 50	r5 12	1 50
24	Mo.	s6 52	2 35	s6 49	2 30	s6 46	2 26	s6 46	2 26	s6 46	2 26
25	Tu.	r5 3	3 2	r5 6	2 59	r5 9	2 56	r5 9	2 56	r5 9	2 56
26	We.	s6 54	3 25	s6 51	3 23	s6 48	3 22	s6 48	3 22	s6 48	3 22
27	Th.	r5 0	3 45	r5 3	3 44	r5 7	3 44	r5 7	3 44	r5 7	3 44
28	Fr.	s6 56	4 3	s6 53	4 3	s6 50	4 5	s6 50	4 5	s6 50	4 5
29	SA.	r4 57	4 22	r5 0	4 24	r5 4	4 26	r5 4	4 26	r5 4	4 26
30	S	s6 59	4 42	s6 55	4 45	s6 52	4 49	s6 52	4 49	s6 52	4 49
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MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	8d. 9h. 24m. A.	8d. 8h. 24m. A.
NEW MOON.....	15d. 5h. 46m. A.	15d. 4h. 46m. A.
FIRST QUARTER..	22d. 9h. 52m. M.	22d. 8h. 52m. M.
FULL MOON	30d. 10h. 22m. M.	30d. 9h. 22m. M.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.				LAT. OF WASH. CIN. & ST. LOUIS.			
Day.	Day of W'k.	Local Mean Time.		Sun R.&S.	Moon R.&S.	Sun R.&S.	Moon R.&S.	Sun R.&S.	Moon R.&S.	Sun R.&S.	Moon R.&S.
		SUN	MOON								
1	Mo.	r4 54	rises.	r4 58	rises.	r5 2	rises.	r5 2	rises.	r5 2	rises.
2	Tu.	s7 1	9 5	s6 57	8 59	s6 54	8 53	s6 54	8 53	s6 54	8 53
3	We.	r4 52	10 7	r4 55	10 0	r4 59	9 53	r4 59	9 53	r4 59	9 53
4	Th.	s7 3	11 4	s7 0	10 57	s6 56	10 49	s6 56	10 49	s6 56	10 49
5	Fr.	r4 49	11 55	r4 53	11 48	r4 57	11 40	r4 57	11 40	r4 57	11 40
6	SA.	s7 5	morn	s7 2	morn	s6 57	morn	s6 57	morn	s6 57	morn
7	S	r4 47	0 39	r4 51	0 33	r4 55	0 26	r4 55	0 26	r4 55	0 26
8	Mo.	s7 8	1 16	s7 4	1 10	s6 59	1 5	s6 59	1 5	s6 59	1 5
9	Tu.	r4 44	1 45	r4 48	1 41	r4 53	1 37	r4 53	1 37	r4 53	1 37
10	We.	s7 10	2 10	s7 6	2 7	s7 1	2 5	s7 1	2 5	s7 1	2 5
11	Th.	r4 42	2 33	r4 46	2 31	r4 51	2 31	r4 51	2 31	r4 51	2 31
12	Fr.	s7 12	2 55	s7 8	2 55	s7 3	2 55	s7 3	2 55	s7 3	2 55
13	SA.	r4 40	3 17	r4 44	3 18	r4 49	3 20	r4 49	3 20	r4 49	3 20
14	S	s7 14	3 42	s7 10	3 45	s7 5	3 48	s7 5	3 48	s7 5	3 48
15	Mo.	r4 38	4 11	r4 42	4 15	r4 47	4 20	r4 47	4 20	r4 47	4 20
16	Tu.	s7 16	sets.	s7 11	sets.	s7 7	sets.	s7 7	sets.	s7 7	sets.
17	We.	r4 36	10 4	r4 40	9 57	r4 45	9 49	r4 45	9 49	r4 45	9 49
18	Th.	s7 18	11 8	s7 13	11 1	s7 8	10 53	s7 8	10 53	s7 8	10 53
19	Fr.	r4 34	11 58	r4 39	11 52	r4 44	11 45	r4 44	11 45	r4 44	11 45
20	SA.	s7 20	morn	s7 15	morn	s7 10	morn	s7 10	morn	s7 10	morn
21	S	r4 32	0 37	r4 37	0 32	r4 42	0 27	r4 42	0 27	r4 42	0 27
22	Mo.	s7 22	1 7	s7 17	1 3	s7 12	1 0	s7 12	1 0	s7 12	1 0
23	Tu.	r4 31	1 31	r4 36	1 29	r4 41	1 27	r4 41	1 27	r4 41	1 27
24	We.	s7 24	1 51	s7 19	1 50	s7 13	1 50	s7 13	1 50	s7 13	1 50
25	Th.	r4 29	2 10	r4 34	2 10	r4 39	2 11	r4 39	2 11	r4 39	2 11
26	Fr.	s7 26	2 28	s7 20	2 29	s7 15	2 32	s7 15	2 32	s7 15	2 32
27	SA.	r4 28	2 48	r4 33	2 51	r4 38	2 54	r4 38	2 54	r4 38	2 54
28	S	s7 27	3 10	s7 22	3 14	s7 17	3 18	s7 17	3 18	s7 17	3 18
29	Mo.	r4 27	3 34	r4 32	3 39	r4 37	3 45	r4 37	3 45	r4 37	3 45
30	Tu.	s7 29	rises.	s7 23	rises.	s7 18	rises.	s7 18	rises.	s7 18	rises.
31	We.	r4 26	8 59	r4 31	8 52	r4 36	8 44	r4 36	8 44	r4 36	8 44



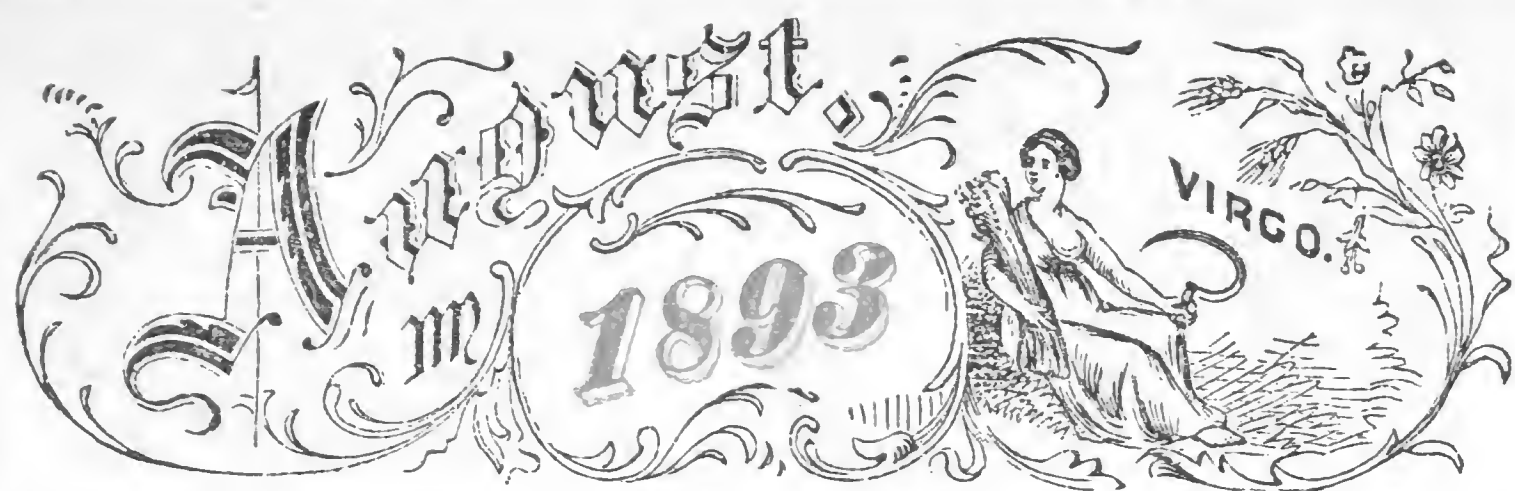
MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	7d. 8h. 43m. M.	7d. 7h. 43m. M.
NEW MOON.....	14d. oh. 51m. M.	13d. 11h. 51m. A.
FIRST QUARTER..	20d. 9h. 37m. A.	20d. 8h. 37m. A.
FULL MOON.....	29d. 1h. 25m. M.	29d. oh. 25m. M.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.		LAT. OF WASH. CIN. & ST. LOUIS.	
Day.	Day of W'k.	Local Mean Time.		Local Mean Time.		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	TH.	r4 25	9 52	r4 30	9 45	r4 36	9 37
2	FR.	s7 31	10 38	s7 26	10 31	s7 20	10 24
3	SA.	r4 24	11 15	r4 30	11 9	r4 35	11 3
4	S	s7 32	11 46	s7 27	11 41	s7 21	11 37
5	MO.	r4 24	morn	r4 29	morn	r4 35	morn
6	TU.	s7 34	0 13	s7 28	0 9	s7 23	0 7
7	WE.	r4 23	0 36	r4 29	0 34	r4 34	0 32
8	TH.	s7 35	0 57	s7 29	0 56	s7 24	0 56
9	FR.	r4 23	1 18	r4 28	1 19	r4 34	1 18
10	SA.	s7 36	1 40	s7 31	1 42	s7 25	1 45
11	S	r4 22	2 6	r4 28	2 9	r4 34	2 14
12	MO.	s7 37	2 39	s7 31	2 44	s7 26	2 50
13	TU.	r4 22	3 20	r4 28	3 26	r4 34	3 33
14	WE.	s7 38	sets.	s7 32	sets.	s7 27	sets.
15	TH.	r4 22	9 48	r4 28	9 41	r4 34	9 34
16	FR.	s7 39	10 32	s7 33	10 26	s7 27	10 21
17	SA.	r4 22	11 6	r4 28	11 2	r4 34	10 58
18	S	s7 39	11 33	s7 34	11 30	s7 28	11 28
19	MO.	r4 23	11 55	r4 28	11 53	r4 34	11 53
20	TU.	s7 40	morn	s7 34	morn	s7 28	morn
21	WE.	r4 23	0 15	r4 29	0 15	r4 34	0 15
22	TH.	s7 40	0 34	s7 34	0 35	s7 29	0 37
23	FR.	r4 24	0 53	r4 29	0 55	r4 35	0 58
24	SA.	s7 40	1 14	s7 35	1 17	s7 29	1 22
25	S	r4 24	1 38	r4 30	1 43	r4 36	1 48
26	MO.	s7 40	2 7	s7 35	2 13	s7 29	2 19
27	TU.	r4 25	2 41	r4 31	2 47	r4 37	2 55
28	WE.	s7 40	3 23	s7 35	3 30	s7 29	3 39
29	TH.	r4 26	rises.	r4 32	rises.	r4 37	rises.
30	FR.	s7 40	9 16	s7 35	9 10	s7 29	9 4
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MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	6d. 5h. 5m. A.	6d. 4h. 5m. A.
NEW MOON.....	13d. 7h. 47m. M.	13d. 6h. 47m. M.
FIRST QUARTER..	20d. oh. 2m. A.	20d. 11h. 2m. M.
FULL MOON.....	28d. 3h. 10m. A.	28d. 2h. 10m. A.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.		LAT. OF WASH. CIN. & ST. LOUIS.	
Day.	Day of W'k.	Local Mean Time.		Local Mean Time.		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	SA.	r4 27	9 49	r4 32	9 44	r4 38	9 39
2	S	s7 40	10 16	s7 34	10 12	s7 29	10 9
3	MO.	r4 28	10 40	r4 33	10 37	r4 39	10 36
4	TU.	s7 39	11 1	s7 34	11 0	s7 28	10 59
5	WE.	r4 29	11 22	r4 35	11 22	r4 40	11 23
6	TH.	s7 39	11 43	s7 33	11 44	s7 28	11 47
7	FR.	r4 30	morn	r4 36	morn	r4 41	morn
8	SA.	s7 38	0 7	s7 33	0 10	s7 27	0 14
9	S	r4 32	0 35	r4 38	0 39	r4 43	0 45
10	MO.	s7 37	1 10	s7 32	1 16	s7 26	1 22
11	TU.	r4 33	1 57	r4 39	2 4	r4 44	2 12
12	WE.	s7 36	2 56	s7 31	3 3	s7 26	3 12
13	TH.	r4 35	sets.	r4 40	sets.	r4 45	sets.
14	FR.	s7 35	9 1	s7 30	8 56	s7 24	8 52
15	SA.	r4 37	9 32	r4 42	9 28	r4 47	9 26
16	S	s7 34	9 57	s7 29	9 55	s7 23	9 54
17	MO.	r4 38	10 18	r4 43	10 17	r4 48	10 17
18	TU.	s7 32	10 38	s7 28	10 38	s7 22	10 40
19	WE.	r4 40	10 57	r4 45	10 59	r4 50	11 2
20	TH.	s7 31	11 17	s7 26	11 20	s7 21	11 24
21	FR.	r4 42	11 40	r4 47	11 44	r4 52	11 49
22	SA.	s7 29	morn	s7 24	morn	s7 19	morn
23	S	r4 44	0 7	r4 48	0 12	r4 53	0 19
24	MO.	s7 27	0 39	s7 23	0 45	s7 18	0 53
25	TU.	r4 46	1 19	r4 50	1 26	r4 55	1 34
26	WE.	s7 25	2 7	s7 21	2 14	s7 16	2 23
27	TH.	r4 48	3 3	r4 52	3 10	r4 57	3 18
28	FR.	s7 23	rises.	s7 19	rises.	s7 14	rises.
29	SA.	r4 50	8 20	r4 54	8 16	r4 58	8 12
30	S	s7 21	8 45	s7 17	8 42	s7 12	8 40
31	MO.	r4 52	9 7	r4 56	9 5	r5 0	9 5



MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	4d. 11h. 23m. A.	4d. 10h. 23m. A.
NEW MOON.....	11d. 3h. 48m. A.	11d. 2h. 48m. A.
FIRST QUARTER..	19d. 4h. 52m. M.	19d. 3h. 52m. M.
FULL MOON.....	27d. 3h. 43m. M.	27d. 2h. 43m. M.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.				LAT. OF WASH. CIN. & ST. LOUIS.			
Day.	Day of W'k.	Local Mean Time.		Sun R.&S.	Moon R.&S.	Sun R.&S.	Moon R.&S.	Sun R.&S.	Moon R.&S.	Sun R.&S.	Moon R.&S.
		SUN	MOON								
1	TU.	r4 53	9 27	r4 57	9 27	r5 1	9 27				
2	WE.	s7 18	9 48	s7 14	9 49	s7 9	9 51				
3	TH.	r4 55	10 10	r4 59	10 12	r5 3	10 16				
4	FR.	s7 15	10 36	s7 12	10 40	s7 7	10 45				
5	SA.	r4 57	11 8	r5 1	11 13	r5 5	11 20				
6	S	s7 13	11 48	s7 9	11 54	s7 5	morn				
7	MO.	r4 59	morn	r5 2	morn	r5 6	0 2				
8	TU.	s7 10	0 41	s7 7	0 48	s7 3	0 57				
9	WE.	r5 1	1 47	r5 4	1 54	r5 8	2 3				
10	TH.	s7 7	3 1	s7 4	3 7	s7 0	3 15				
11	FR.	r5 3	sets.	r5 6	sets.	r5 10	sets.				
12	SA.	s7 4	7 57	s7 1	7 54	s6 58	7 52				
13	S	r5 5	8 20	r5 8	8 19	r5 12	8 18				
14	MO.	s7 2	8 40	s6 59	8 40	s6 55	8 41				
15	TU.	r5 7	8 59	r5 10	9 0	r5 14	9 3				
16	WE.	s6 59	9 19	s6 56	9 22	s6 53	9 25				
17	TH.	r5 10	9 41	r5 12	9 45	r5 15	9 50				
18	FR.	s6 56	10 6	s6 53	10 11	s6 50	10 17				
19	SA.	r5 12	10 37	r5 14	10 43	r5 17	10 50				
20	S	s6 53	11 14	s6 50	11 21	s6 47	11 29				
21	MO.	r5 14	11 59	r5 16	morn	r5 19	morn				
22	TU.	s6 50	morn	s6 47	0 6	s6 44	0 15				
23	WE.	r5 16	0 52	r5 18	0 59	r5 21	1 8				
24	TH.	s6 46	1 53	s6 44	1 59	s6 42	2 7				
25	FR.	r5 18	3 1	r5 20	3 6	r5 23	3 13				
26	SA.	s6 43	4 11	s6 41	4 15	s6 39	4 20				
27	S	r5 20	rises.	r5 22	rises.	r5 25	rises.				
28	MO.	s6 40	7 33	s6 38	7 32	s6 36	7 32				
29	TU.	r5 22	7 52	r5 24	7 53	r5 26	7 54				
30	WE.	s6 37	8 14	s6 35	8 16	s6 33	8 19				
31	TH.	r5 24	8 39	r5 26	8 42	r5 28	8 47				



MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	3d. 4h. 41m. M.	3d. 3h. 41m. M.
NEW MOON.....	10d. 2h. 5m. M.	10d. 1h. 5m. M.
FIRST QUARTER..	17d. 11h. 19m. A.	17d. 10h. 19m. A.
FULL MOON.....	25d. 3h. 23m. A.	25d. 2h. 23m. A.

LATITUDE OF BOSTON AND CHICAGO.				LAT. OF NEW YORK AND PHILA.				LAT. OF WASH. CIN. & ST. LOUIS.			
Day.	Day of W'k.	Local Mean Time.		Sun R.&S.	Moon R.&S.	Sun R.&S.	Moon R.&S.	Sun R.&S.	Moon R.&S.	Sun R.&S.	Moon R.&S.
		SUN	MOON								
1	FR.	r5 25	9 9	r5 27	9 14	r5 29	9 20				
2	SA.	s6 31	9 47	s6 30	9 53	s6 28	10 0				
3	S	r5 27	10 34	r5 29	10 41	r5 31	10 49				
4	MO.	s6 28	11 33	s6 26	11 40	s6 25	11 49				
5	TU.	r5 30	morn	r5 31	morn	r5 33	morn				
6	WE.	s6 24	0 43	s6 23	0 50	s6 22	0 58				
7	TH.	r5 32	2 0	r5 33	2 6	r5 35	2 12				
8	FR.	s6 21	3 16	s6 20	3 21	s6 19	3 26				
9	SA.	r5 34	4 32	r5 35	4 35	r5 36	4 39				
10	S	s6 18	sets.	s6 16	sets.	s6 15	sets.				
11	MO.	r5 36	7 1	r5 37	7 2	r5 38	7 3				
12	TU.	s6 14	7 22	s6 13	7 24	s6 12	7 27				
13	WE.	r5 38	7 42	r5 39	7 45	r5 40	7 50				
14	TH.	s6 11	8 6	s6 10	8 11	s6 9	8 16				
15	FR.	r5 40	8 35	r5 41	8 41	r5 42	8 47				
16	SA.	s6 7	9 9	s6 7	9 15	s6 6	9 23				
17	S	r5 42	9 50	r5 43	9 57	r5 43	10 6				
18	MO.	s6 3	10 40	s6 3	10 47	s6 3	10 56				
19	TU.	r5 44	11 38	r5 45	11 45	r5 45	11 53				
20	WE.	s6 0	morn	s6 0	morn	s6 0	morn				
21	TH.	r5 47	0 43	r5 47	0 49	r5 47	0 56				
22	FR.	s5 56	1 52	s5 56	1 57	s5 57	2 3				
23	SA.	r5 49	3 2	r5 49	3 5	r5 49	3 10				
24	S	s5 53	4 12	s5 53	4 14	s5 53	4 17				
25	MO.	r5 51	rises.	r5 51	rises.	r5 51	rises.				
26	TU.	s5 49	6 19	s5 50	6 21	s5 50	6 23				
27	WE.	r5 53	6 43	r5 53	6 46	r5 52	6 50				
28	TH.	s5 46	7 10	s5 46	7 14	s5 47	7 20				
29	FR.	r5 55	7 45	r5 55	7 51	r5 54	7 58				
30	SA.	s5 43	8 30	s5 43	8 37	s5 43	8 45				
...				



MOON'S PHASES.
(In Standard Time.)

EAST'N DIVISION.

CENT. DIVISION.

LAST QUARTER...	2d. 10h. 19m. M.	2d. 9h. 19m. M.
NEW MOON	9d. 3h. 27m. A.	9d. 2h. 27m. A.
FIRST QUARTER..	17d. 6h. 20m. A.	17d. 5h. 20m. A.
FULL MOON	25d. 2h. 28m. M.	25d. 1h. 28m. M.
LAST QUARTER...	31d. 5h. 42m. A.	31d. 4h. 42m. A.

**LATITUDE OF BOSTON
AND CHICAGO.**

**LAT. OF NEW YORK
AND PHILA.**

**LAT. OF WASH.
CIN. & ST. LOUIS.**

Day.	Day of W'k.	Local Mean Time.		Local Mean Time.		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	S	r5 58	9 26	r5 57	9 33	r5 56	9 42
2	Mo.	s5 39	10 33	s5 40	10 40	s5 40	10 48
3	Tu.	r6 0	11 47	r5 59	11 53	r5 58	morn
4	We.	s5 36	morn	s5 37	morn	s5 37	0 0
5	Th.	r6 2	1 3	r6 1	1 8	r6 0	1 14
6	Fr.	s5 32	2 17	s5 33	2 20	s5 34	2 25
7	Sa.	r6 4	3 29	r6 3	3 31	r6 2	3 34
8	S	s5 29	4 37	s5 30	4 38	s5 31	4 39
9	Mo.	r6 7	5 44	r6 5	5 43	r6 4	5 43
10	Tu.	s5 25	sets.	s5 27	sets.	s5 28	sets.
11	We.	r6 9	6 9	r6 7	6 13	r6 6	6 18
12	Th.	s5 22	6 35	s5 24	6 40	s5 25	6 46
13	Fr.	r6 11	7 6	r6 9	7 12	r6 8	7 20
14	Sa.	s5 19	7 44	s5 21	7 51	s5 22	7 59
15	S	r6 14	8 31	r6 12	8 38	r6 10	8 47
16	Mo.	s5 16	9 26	s5 18	9 33	s5 20	9 42
17	Tu.	r6 16	10 27	r6 14	10 33	r6 12	10 41
18	We.	s5 13	11 32	s5 15	11 37	s5 17	11 44
19	Th.	r6 18	morn	r6 16	morn	r6 14	morn
20	Fr.	s5 10	0 40	s5 12	0 44	s5 14	0 49
21	Sa.	r6 21	1 50	r6 18	1 53	r6 16	1 57
22	S	s5 7	3 1	s5 9	3 2	s5 11	3 5
23	Mo.	r6 23	4 13	r6 20	4 13	r6 18	4 14
24	Tu.	s5 4	5 27	s5 6	5 25	s5 9	5 25
25	We.	r6 25	rises.	r6 23	rises.	r6 20	rises.
26	Th.	s5 1	5 41	s5 3	5 46	s5 6	5 53
27	Fr.	r6 28	6 24	r6 25	6 30	r6 22	6 38
28	Sa.	s4 58	7 17	s5 1	7 24	s5 4	7 33
29	S	r6 30	8 22	r6 27	8 29	r6 25	8 38
30	Mo.	s4 55	9 36	s4 58	9 42	s5 1	9 50
31	Tu.	r6 33	10 53	r6 30	10 58	r6 27	11 4



MOON'S PHASES.
(In Standard Time.)

EAST'N DIVISION.

CENT. DIVISION.

NEW MOON.....	8d. 7h. 57m. M.	8d. 6h. 57m. M.
FIRST QUARTER..	16d. 0h. 44m. A.	16d. 11h. 44m. M.
FULL MOON	23d. 1h. 8m. A.	23d. 0h. 8m. A.
LAST QUARTER...	30d. 4h. 8m. M.	30d. 3h. 8m. M.

**LATITUDE OF BOSTON
AND CHICAGO.**

**LAT. OF NEW YORK
AND PHILA.**

**LAT. OF WASH.
CIN. & ST. LOUIS.**

Day.	Day of W'k.	Local Mean Time.		Local Mean Time.		Local Mean Time.	
		SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	We.	r6 34	morn	r6 31	morn	r6 28	morn
2	Th.	s4 52	0 8	s4 55	0 12	s4 58	0 17
3	Fr.	r6 36	1 19	r6 33	1 21	r6 30	1 25
4	Sa.	s4 49	2 27	s4 52	2 28	s4 56	2 30
5	S	r6 39	3 34	r6 36	3 34	r6 32	3 34
6	Mo.	s4 47	4 40	s4 50	4 38	s4 54	4 38
7	Tu.	r6 42	5 46	r6 38	5 43	r6 35	5 41
8	We.	s4 45	sets.	s4 48	sets.	s4 52	sets.
9	Th.	r6 44	5 6	r6 41	5 12	r6 37	5 19
10	Fr.	s4 42	5 43	s4 46	5 50	s4 50	5 58
11	Sa.	r6 47	6 26	r6 43	6 33	r6 39	6 42
12	S	s4 40	7 17	s4 44	7 24	s4 48	7 33
13	Mo.	r6 49	8 15	r6 45	8 22	r6 41	8 30
14	Tu.	s4 39	9 19	s4 43	9 25	s4 47	9 32
15	We.	r6 52	10 25	r6 48	10 30	r6 44	10 35
16	Th.	s4 37	11 32	s4 41	11 35	s4 45	11 40
17	Fr.	r6 54	morn	r6 50	morn	r6 46	morn
18	Sa.	s4 35	0 40	s4 40	0 42	s4 44	0 45
19	S	r6 57	1 49	r6 53	1 50	r6 48	1 51
20	Mo.	s4 34	3 0	s4 38	2 59	s4 43	2 59
21	Tu.	r6 59	4 15	r6 55	4 13	r6 50	4 11
22	We.	s4 33	5 35	s4 37	5 31	s4 42	5 27
23	Th.	r7 2	6 58	r6 57	6 53	r6 52	6 47
24	Fr.	s4 32	rises.	s4 36	rises.	s4 41	rises.
25	Sa.	r7 4	6 5	r6 59	6 12	r6 54	6 21
26	S	s4 31	7 20	s4 35	7 27	s4 40	7 35
27	Mo.	r7 6	8 38	r7 1	8 44	r6 56	8 50
28	Tu.	s4 30	9 55	s4 35	9 59	s4 39	10 4
29	We.	r7 8	11 10	r7 3	11 13	r6 58	11 17
30	Th.	s4 29	morn	s4 34	morn	s4 39	morn
...



MOON'S PHASES.
(In Standard Time.)

	EAST'N DIVISION.	CENT. DIVISION.
NEW MOON.....	8d. 2h. 40m. M.	8d. 1h. 40m. M.
FIRST QUARTER..	16d. 5h. 21m. M.	16d. 4h. 21m. M.
FULL MOON	22d. 11h. 36m. A.	22d. 10h. 36m. A.
LAST QUARTER...	29d. 6h. 18m. A.	29d. 5h. 18m. A.

**LATITUDE OF BOSTON
AND CHICAGO.**

Day.	Day of W'k.	Local Mean Time.	
		SUN R.&S.	MOON R.&S.
1	FR.	r7 10	0 20
2	SA.	s4 28	1 27
3	S	r7 12	2 32
4	MO.	s4 28	3 37
5	TU.	r7 14	4 42
6	WE.	s4 28	5 47
7	TH.	r7 16	6 51
8	FR.	s4 28	sets.
9	SA.	r7 18	5 11
10	S	s4 28	6 7
11	MO.	r7 20	7 9
12	TU.	s4 28	8 15
13	WE.	r7 21	9 21
14	TH.	s4 29	10 27
15	FR.	r7 23	11 33
16	SA.	s4 29	morn
17	S	r7 24	0 40
18	MO.	s4 30	1 50
19	TU.	r7 26	3 5
20	WE.	s4 31	4 25
21	TH.	r7 26	5 47
22	FR.	s4 32	7 8
23	SA.	r7 27	rises.
24	S	s4 33	6 11
25	MO.	r7 28	7 32
26	TU.	s4 34	8 52
27	WE.	r7 29	10 6
28	TH.	s4 36	11 16
29	FR.	r7 29	morn
30	SA.	s4 37	0 24
31	S	r7 30	1 30

**LAT. OF NEW YORK
AND PHILA.**

Local Mean Time.	
SUN R.&S.	MOON R.&S.
r7 5	0 21
s4 33	1 27
r7 7	2 31
s4 33	3 34
r7 9	4 38
s4 33	5 42
r7 11	6 45
s4 33	sets.
r7 13	5 18
s4 33	6 14
r7 15	7 15
s4 33	8 20
r7 16	9 25
s4 34	10 29
r7 18	11 34
s4 34	morn
r7 19	0 40
s4 35	1 48
r7 20	3 2
s4 36	4 20
r7 21	5 41
s4 37	7 1
r7 22	rises.
s4 38	6 17
r7 23	7 37
s4 40	8 55
r7 23	10 8
s4 41	11 16
r7 24	morn
s4 42	0 23
r7 24	1 28

**LAT. OF WASH.
GIN. & ST. LOUIS.**

Local Mean Time.	
SUN R.&S.	MOON R.&S.
r7 0	0 24
s4 38	1 28
r7 2	2 30
s4 38	3 33
r7 4	4 35
s4 38	5 37
r7 6	6 39
s4 38	sets.
r7 8	5 27
s4 38	6 22
r7 9	7 22
s4 39	8 26
r7 11	9 30
s4 39	10 33
r7 12	11 36
s4 40	morn
r7 14	0 41
s4 41	1 48
r7 15	3 0
s4 42	4 16
r7 15	5 35
s4 43	6 54
r7 16	rises.
s4 44	6 24
r7 17	7 43
s4 45	9 0
r7 18	10 11
s4 46	11 18
r7 19	morn
s4 48	0 23
r7 19	1 26

Ther.

TUES. FEB. 28, 1893

Wea.

Birds observed between
Mann's Choice and
New Paris.

June 2 93

Chimney Swift C
Barn Swallow C
Phoebe 4
Bluebird C
Am Goldfinch 2
Meadow Lark 3
Robin C
Yellow Warblers 3
Crown B. - 10 birds C
Kingbird 3
Redwinged Blackbird 6
Chipping sp. C
Grass Finch C
V Yellow winged Sparrow 3
House Wren 2
Crow C
Wood pewee 2
Indigo-bird 1
T. Licker 1
Red Headed Woodpecker 1
Red-eyed Vireo C

Y Kingfisher 1
 Baltimore Oriole 2
 Mourning Dove 2
 Night Hawk 6

The country between
 Mann's Choice and
 New Paris is very
 hilly and quite
 heavily wooded with
 oaks and chestnuts
 with a very few pitch
 and white pines.
 When within 3 or 4
 miles of New Paris
 the reason for calling
 the elevation Chestnut
 Ridge becomes very
 apparent. The woods
 being composed almost
 wholly of these trees.
 New Paris is in the
 valley between Chestnut
 Ridge and the main
 Ridge of the Alleghenys
 which is said to

be about 7 miles
 distant. Two or three
 chipmunks were
 seen on the way
 over.

Mammals

New Paris
 Chipmunk
 Red squirrel
 Gray " "
Arvicola riparius

Opusculums are said
 to be found occa-
 sionally

Some of the notable trees
 Sugar maple
 Chestnut Oak
 White oak
 Basswood

June 3, 1893

Explored a portion of the country west of New Paris towards the mountains. It consists mostly of hills which are covered with quite a heavy growth of oaks and maples for the most part. Also went about 3 miles up the creek. There I found quite a heavily wooded "bottom". A ravine was found in which there were many turkeys but no birds of note were seen there. The following list of birds were seen during the day.

Ther.

TUES. FEB. 28, 1893

Wea.

New Paris June 3, 93
Baltimore Oriole.

A male seen about the house.

Chipping sparrow. C.
House wren

A pair near the house

Barn swallow
Common

Chimney swift
Very common

Song sparrow
many seen

Field sparrow.
A few noted

Brown thrush
Seen

Red-eyed Vireo
Very common

Crow
" "

Acad's bird
Several seen

Red-headed vireo.

Seen wherever there are

Ther.

SUN. JAN. 9, 1893

Wea.

Ther.

TUES. FEB. 28, 1893

Wea.

MON. JAN. 9, 1893

Thurs. Jan. 10, 1893

Wca.

Thurs.

TUES. FEB. 28, 1893

Wea.

- Call dead trees
 ✓ Green bird
 Many heard and
 seen in the woods
 White B. Nuthatch
 Very common
 ✓ Great Crest. Flycatcher
 Quite common
 ✓ Y B. Cuckoo
 several heard
 ✓ Short-bill Warbler
 Three singing males
 seen. One nest found
 Maryland Yellowthroat
 Not common one or
 two seen
 ✓ Ruffed Grouse
 One heard drumming
 ✓ Wood Pewee
 Common in deep woods
 ✓ Red-tail Hawk
 One seen in woods
 ✓ Flicker
 several seen
 ✓ Scarlet Tanager several seen
 and heard

- ✓ Sharp-shinned Hawk
 One seen
 ✓ Kingbird
 Common
 ✓ Meadow Lark
 Several seen
 ✓ Mourning Dove
 two or three seen
 ✓ Redwing Blackbird
 A number seen about
 the small meadows
 ✓ Yellow Warbler
 A pair about the house
 ✓ Catbird
 Common
 ✓ Pileated Woodpecker
 One seen
 ✓ Quail
 Several heard up the
 creek
 ✓ Night Hawk
 Quite common
 ✓ Robin
 One or two seen

✓ Pewee

Quite common

Cedar Bird 2 or 3 seen

Birds accidentally seen
 Sunday June 27
 not seen the day before

✓ Goldfinch

✓ Green Heron

✓ Redbellied Noddy

✓ Tufted Tit

✓ House Finch

✓ Purple Grackle

✓ Cowbird

✓ Tree Swallow

✓ Spotted Sandpiper

✓ Redstart

✓ Sparrow Hawk

✓ Red shouldered Hawk

June 5 New Paris

Chipping Sparrow C

Goldfinch Several

Crown Blackbird "

Crow C

Redbellied Noddy 1

Red-eyed Vireo V.C.

Baltimore Oriole Several

Redwing Blackbird C

White B. Noddy C

Pewee C

House Wren Several

Redhead Noddy V.C.

Yellow B. Cuckoo Several

✓ Canadian Warbler One

heard and seen in

some high rocks in a

part of Chestnut Ridge

I got a good sight of

it and identified it

beyond question but

did not succeed in

securing it.

Great Crested Flycatcher	Several
Field Sparrow	Common
Orange Lin	One seen
✓ Ash-throated	Several
Grass Finch	Common
Common Bird	2
Flicker	1
✓ Broadwing Hawk	2 were
Woodcock	started in the woods
7 fields near small	
woods	
Common Thrush	2
Starling	Several
✓ B. Chat	One shot.
Mourning Dove	Common
Killdeer	One seen
Night Hawk	Several
Thrush	Common
Long Sparrow	"
House Wren	Several
Meadow Lark	"
Bluebird	"

June 6

Came up the mountain from New Paris this morning. It was rainy and birds were not plentiful. Went about half way up the mountain. A dark woods. Thrushes and one or two chickadees. The woods on the east side is composed mostly of oaks. Chestnuts and maples & pines being found to speak of. As one starts down the west side, however, a change is at once seen. Hemlocks increase until here about a mile from the top they are about

don't. coming to rain
but few birds were
seen today

A few birds noticed
in the way up

Bluejay
Chesnut-sided W.

Redstart

Wood Thrush

Red-eyed Vireo

Indigo Bird

Ruffed Grouse

Ther.

TUES. FEB. 28, 1893

Wea.

Birds seen at
Cummings

June 6, '93

- ✓ Chimney Swift C
- ✓ Barn Swallow C
- ✓ Crow V.C.
- ✓ Snowbird Abundant
- ✓ Greenbird C
- ✓ Robin C
- ✓ Red-eyed Vireo VC
- ✓ Maryland W. 1 seen
- ✓ Catbird a few
- ✓ Broad-wing Hawk a pair seen
- ✓ Melodious Thrush 2
- ✓ Y.B. Noddy 1

Birds seen at
Crumbs June 7, 93

Robin	C
✓ Song Sparrow	C
✓ Catbird	Several
Red-eyed Vireo	VC
✓ Solitary Vireo	2
✓ Blk Thr Blue W.	1
Swainbird	C
Bluebird	Several
Chimney Swift	C
Indigo Bird	C
Barn swallow	Several
Canadian Warbler	1
Winter Wren	one heard
Grass Thrush	3
Field sp.	2
Perch	Several
Crow	VC
Robin	1
Redhead Warbler	2
Chimney	2
Hairy Woodpecker	1

June 7, 93

Wilson's Thrush	Several
heard and seen	
Cloudbird	VC
Swainbird	C
Robin	C
Grass	one heard
Barn swallow	Several
Chimney Swift	C
Blackburnian Warbler	1
Blk Thr Blue	3
Crow	VC
Hairy Woodpecker	2
Y-B Woodpecker	2
Redhead	C
Solitary Vireo	2
Red-eyed	VC
Scarlet Tanager	2
Chestnut sided W.	2
Indigo-bird	C
Wood Thrush	2
Song Sparrow	C
Brown Creeper	1
Grassfinch	1

Bluejay 2
 Field Sparrow several
 Pewee 2
 Woodpecker 2
 Flicker 2
 Whippoorwill 1
 Cedar Bird several seen
 Hummingbird 1 ♀ seen

Cumms June 9.
 Investigated a high
 ridge on which
 were growing some
 large pocket pines.
 It is probably the highest
 part of the ridge in this
 vicinity. I found the
 top to be covered with
 a thick growth of
 scrub oaks and blue-
 berry bushes with some
 patchy pines scattered
 over it. Chestnut sides
 and Maryland yellow
 pines proved to be quite
 common here. Also
 found a yellow B Chat.
 Found a nest of the
 Wild Turkey in the
 edge of the chestnut
 woods bordering the
 "barren". It contained
 four or five eggs. During
 the eggs being in

Ther.

TUES. FEB. 28, 1893

Wea.

an advanced stage
of incubation. I did
not disturb them or
the bird following is
a list of birds seen
during the day.

Flicker several seen
Y.B. Warbler one seen
Snowbird several were
seen and a nest
was found nearly
finished

Canadian Warbler
a pair was found
in a low thick

Water Thrush
One was seen in
the thicket and a
nest found nearly
finished

Red-eyed Vireo 7C

Robin C

Blk cap. Chickadee

two were seen

Song sparrow C

Cornbird numberless
Bluejay One heard

Crow common as usual

Red shouldered Hawk
One was seen on the
hillside

Red tail Hawk

One seen
Bluebird Several

Chimney Swift several

found on mountain
Yellow B Chat one shot
Chestnut side C

White throat nuthatch
Several were heard
in the creek bottom

Cedar bird Several
Owlson's Thrush Several

Cuckoo One heard
Chimney Swift C

Barn Swallow C

June 10, '93

Brown Thrush
One heard in
the early morning
Yellow B Woodpecker
One seen
White B Nuthatch
Several seen
Snowbird
common

Robin I.C.
Red-eyed Vireo V.C.
Chipping Sparrow
A pair seen near
the house
Crows
Very common as
usual.

Tree Sparrow V.C.
Goldfinch Vireo
One shot
Tanager several noted
Wilson's Thrush C.

Ther.

TUES. FEB. 28, 1893

Wea.

Rosebreasted Grosbeak
One killed
Canadian Warbler
Several seen
Waterthrush Heard
Downy Woodpecker
One seen
Hairy Woodpecker
2 or 3 seen
Mourning Dove
Two or three seen
Kingbird a pair seen
near the house
Least Flycatcher
One seen
Chickadee warbler.
several
Woodthrush one or two heard
Brown Creeper
A nest of this
species was found con-
taining young. It was behind
a loose plate of bark
on the trunk of a dead
hemlock tree 10 feet high

June 12 Lemnis.

Robin V.C.

Redwing C.

Yellow B. Warbler

Several seen

Indigo Bird V.C.

Chipping Sparrow

Several seen

Blk. & Blue Warbler

Several

Solitary Vireo

Three or four heard
and seen.

Water Thrush One heard.

Humbird Very common as usual

Mocker One as usual.

Chickadee a number seen

Downy Warbler One seen

also nest found.

Chestnut-side Warbler

found to be quite common
in a sort of pasture which
had been burnt over and
had grown up to bushes
perch. thrush. Quite common

in the above locality

Red breasted Grosbeak

One or two heard singing in
thicket by a small brook

Wilson's Warbler Several noted

Long sparrow V.C.

Harpy Warbler Several noted.

Magpie Warbler a pair secured
as well as their nest and
eggs

~~Chestnut-side Warbler a pair secured~~
~~as well as their nest and~~
~~eggs~~

✓ Night Hawk. Several heard
and seen in the evening

June 13

Cumtoto to Ritz Mills.
Saw that Blue Jay seen
Canadian Grackles several
Barn Swallow Thrush

Several noted

✓ Saw that Green Warbler

A male bird was seen
about a mile from
Cumtoto but it escaped
hunting.

Several noted

Chipping Sparrow common along
the road

Hemlocks. Begin to grow
scarce at Ritz and
white pines to take their
places. These continue to
be found for about 3 miles
and then disappear and
as Hornersville is reached
no conifers at all are found.
On approaching Hornersville
Wood and Wilsons Thrushes
were observed as well as

Spotted. sandpeppers and

Night Hawks

The country here seems
to be made up of
small steep and rounded
Hills which are covered
with woods composed
mostly of ^{of about} oak and maple

Hamersville June 14 '93

Went round the hills nearly
all day. Most of my birds
were found on a hillside
grown up to bushes and
hairs. Following is a list

Pearl. Several seen about
houses and bridges
and Plover

Common in the woods

Purple Grackle

Seen near the town

Redwing Blackbird

Seen about a small meadow

near the town

Ringed Gull

Very common everywhere

Scarlet Tanager

Several seen and heard.

Ballou's Oriole

Several about the town

Robin

Very common everywhere

Wilson's Thrush

Quite common

Mockers - another common

species in the woods

Flicker

Several seen

Long sparrow

Common everywhere

Redtail Hawk Two killed

Chimney Very common

Coltred

Rose breasted Grosbeak

Several seen

Chickadee Warbler

Common in the hillsides

Yellow Warbler

Common about town

Maryland Yellowthroat

Seen on the hillside

Cowbird

Common in the woods

Chimney Swift

Very common

Barn Swallow

Common about houses

East Swallow

A few seen

Yellow B Chat - Several seen

Am Goldfinch

Common about the town
Sharp-shin Hawk

A bird of this species
was seen which had in
its talons a small bird
which it was preparing
to eat

Mourning Dove

Quite common
Field Sparrow

A number of Parrots
seen

Brown Thrasher

Several seen

Crow. Common

Blue Jay. A number heard
in the woods

Grass Finch

A number seen
about the fields

Yellow Billed Cuckoo

One seen

Spotted Sandpiper

Seen in the fields and

about Long Creek

Great Crested Flycatcher

One seen

Cherry Bird

A few seen

Kingbird. Two or three seen

Red-bellied Hummer

One seen in a garden

Chipping Sparrow

Seen near the town

Night Hawk

Numbers seen at evening

Indigo Bird

Two seen by
roadside

Cowbird

Two or three seen in
a field

Quail

Hard near RR station

Whippoorwill

One heard on my return
to Harpersville June 20.

Hoversville & Strogdon
 no bird of importance
 were seen At Ligon-
 town a few juncos and
 Kinglets were seen
 These increased to about
 Celman's and they
 disappeared. Meadowlarks
 seen at Celman's and
 below Robin, Town
 mallards and chimney
 swifts seen everywhere

Crow seen at
 Lomerset June 15, '93
 Purple Martin
 common about town
 Chimney Swift
 common
 Bobolink
 several seen in a
 field near town
 Song sparrow
 Very common
 Meadow Lark
 common about fields
 Purple Grackle
 a number seen
 Bluebird Very common
 Spotted Sandpiper
 One seen at a small
 brook
 Redwing Blackbird
 several seen in
 fields near town
 Crow. Common One was
 seen carrying away
 a young Rabbit with

The old ones in pursuit
Flicker

Several observed
Chipping sparrow
Common

Field sparrow
A number seen

Red-eyed Vireo
Very common

Woodpecker
Several seen

Bluejay
Very common

Brown Thrush
Common

Catbird common
Maryland yellowthroat
a number seen

Black and white creeper.
One seen

Chestnut side Warbler
Common

Hermit Thrush
Several seen and
Heard and appar.

cutly common
Solitary Farrow

One seen
Night Hawk common

Cherry bird "
Cormorant several seen
Ducks - bird

One seen
Yellow B. Chat
In other observed
Green Heron

One observed
Bluebird common
Wilson's Thrush

Several were heard
One Goldfinch
A common species
Parrot

One or two seen
Blk. & Red Green Warbler
One seen among some
white pines

Canada Warbler
Several seen
Harry Waples. a Pair seen

Black cap chickadee
 One or two heard
 Blk Thrt Blue Warbler
 One seen
 Scarlet Tanager
 One with with
 Mourning Dove
 One with with
 Barn swallow
 Common everywhere
 Whippoorwill
 One heard in evening

Sunset For June 16

To the south of the
 town is quite a large
 extent of a country
 which evidently used
 to be covered with
 a heavy growth of pine
 and hemlock. ^{Most of this}
 has been cut away
 by piece-meal clearing
 into small portions of
 its intact or partly so
 large areas have grown
 up to oak bushes and
 laurel and here
 Hermit thrushes Chestnut
 sided warblers Chewinks
 and other birds were
 common. Canadian
 Warblers were common
 along a creek which
 flowed through this
 tract as well as

Wilson's Thrush and
a few Black-throated Blue
Grackles. Black-throated
Green Warblers were
found on the hillsides
among the pines.

Nearly all the species
reported on the 1st and
the preceding day
were found in this
tract.

Following is a list

of birds.

seen near Hudson
Purple Martin
common about town

Robin V.C.

Indigo Sparrow V.C.

Meadow Lark

Several were
seen near the town

Black-chinned Greenlet
found about houses.

Chipping Sparrow

Very common bird
Chestnut-sided Warbler

Common
Red-winged Blackbird
Common about

the fields and meadows
Catbird V.C.

Field Sparrow V.C.

Chimney a nest found
in trunk of woodshed
Black Cap Chickadee

One or two

Brown Thrush Common

Red-eyed Vireo V.C.

Blue Jay Common

Curve Bird

heard constantly

Scarlet Tanager

Several observed

Mourning Dove

One pair seen

White B Nuthatch

Several seen

Solitary Vireo a number

Ther.

TUES. FEB. 28, 1893

Wea.

Harry Waples

Several seen
Black-throated Green Warbler

A pair seen
Hermit Thrush

Very common
Flicker

Several seen
Hairy Woodpecker
Common in the
oak trees.

Black-throated Blue W.
Two or three seen

Canadian Warbler S.G.
Ruffed Grouse

Seen seen in
deep woods

Rose breasted Grosbeak
One met with in
oak woods.

B. lutea Common

Yellow R. Chat

Several colored

Red-eyed Vireo

Several seen

Willow Thrush

Very common in
low woods

Sharp-shinned Hawk
One seen at the
edge of woods

Wood pewee

Heard almost
every where

Purple Grackle

A number seen

Somerset Pa
June 17 93

A section of country
to the north and
east of the town
was explored today
a small swampy grove
up to alder and cotton-
wood was entered
and a colony of
Grackles was found
as well as Cecadon
Flycatchers and
seen. Many
blue that were Grackles
Hermit Thrushes and
yellow bellied Sapsuckers
were seen in a piece
of woods. Some
oak and chestnut
The following birds
were observed

Meadow Lark

Seen in fields
near town

Redwing Blackbird

seen in same
situations as last.

King bird

One seen by
side of railroad

Purple Grackle

A large number
observed

Robin Pl.

Blackbird Common

Cecadon Flycatcher

Several seen
Grosbeak

One seen
Song Sparrow

Very common
Am Goldfinch

Little common
Chimney

Several observed

Ther.

TUES. FEB. 28, 1893

Wea.

Brown Thrasher
Several seen
Calbird
Common
Field sparrow
Common
Chestnut-backed Warbler
abundant
Greenbird
A number heard
Wood pecker
Very common
Flicker
Several seen
Pewee
One or two
Spotted Sandpiper
A pair seen in
pasture.
Red-eyed Vireo
Very common
Killdeer
A pair seen in
the fields

✓ Grass finch
Very common
in the fields
✓ Yellow winged sparrow
Several heard
✓ Yellow Warbler
One seen in an
orchard
Bluejay
Common in
the woods
Crow
A number seen
✓ Red-headed Vireo
A pair seen near
their nest.
✓ Red shouldered Hawk
One seen
Chipping sparrow
Common
✓ Gold Crest flycatcher
One seen
✓ Yellow Bellied Sapsucker
One started from its
nest

Blk. & Green
Warbler
@ pass seen in
deep woods
Hermit Thrush
Seen in same
situation as last.

Thurmsville &
Jenners Cross Roads -
June 21, '93
Some Canadian country
about halfway between
Thurmsville and Jenners cross
Roads but no Canadian
birds observed. No
conifers at Jenners X
Roads. Horned Larks and
quail seen between June 22
J. X Roads and Jenners town
June 22

Birds seen between summit
of Laurel Ridge and
Langhams town.

Blk. & Blue Warbler.
Wilson's Thrush

Junco bird

Canadian Warbler.

Meadow Lark

Meadow Lark

Spotted Sandpiper

Laughlinstown

Westmoreland Co Pa

June 23. 1893

Robin common everywhere
Crow Blackbird.

common about Town

Catbird

Very common

Wood Thrush

Very common

Field Sparrow

Common

Chestnut-sided Warbler

found near town and
also on top of the Mt.

Corn Bird

A very common species

Red-eyed Vireo

Very common

Chimney

Abundant.

Yellow-bellied Chat.

found on the hillsides about
the town

Old Goldfinch

A few seen

Flicker

One or two seen

Crow

Abundant.

Long Sparrow

Very common

Baltimore Oriole

A few about town

Brown Thrasher

Quite common

Downy Warbler

A pair seen

White Bellied Nuthatch.

A few observed

Chipping Sparrow -
abundant.

Indigo Bird

Common

Military Vireo

Quite common about
 Laurel Ridge

Black throat Blue Warbler

common in the ravines
and on the hillsides of
Laurel Ridge

Canadian Warblers.

A very common
species

Blk and yellow Warbler.

A few seen about the
Ridge

Blk and green Gr.

Two or three seen.

Redstart

A female seen

Scarlet Tanager

Common

Rose breasted Grosbeak

A number seen on the
Ridge

Indigo Thrush

Very common

B & W Warbler.

One seen

Blk billed Cuckoo

A nest of the species
was found containing one
young one about 2 days young.

Woodpecker

Not common One seen

Yellow billed Cuckoo

One was shot

Meadow Lark

Common about town

Mourning Dove

Quite common

Whippoorwill

Few heard
in the evening.

Loughlinstown

June 24, 93

House Wren

One heard

Garnswallow

A common species
about the town

Crow Blackbird

Quite common about
the town

Earl swallow

A few pairs about town

Reynolds Wren

abundant

Tringa Finch

Very common

Catbird

abundant

Robin

Very common

Chimney

Very common

Crowbird

Very common in the woods

Ther.

TUES. FEB. 28, 1893

Wea.

B Chat

common on the
Hillsides

Field Sparrow.

VC -

Chipping sparrow.

very common species

Crow

common

Mourning Dove

One or two seen

Brown thrasher

common

Flicker

a few seen

Downy Warbler.

One seen

Ruby throat Hummer

One seen

Scarlet Tanager

common

Long sparrow.

Very common

Broadwing Hawk

The stomach of one

Ther.

WED. MAR. 1, 1893

Wea.

Trilled. contained
remains of grasshoppers
and other insects.

Linnbird

Several seen

on Laurel Ridge

Canadian Warbler

Very common on

the Ridge

Chestnut side Warbler.

A number seen

about the Ridge

Blk. thro. Blue Warbler

Very common

B. & W. Warbler

Several seen

Indigo Thrush

Very common

on the Ridge.

Mocker

One seen at the

head of a ravine

near the top of Laurel

Ridge

Sketchy Green Warbler

Ther.

THURS. MAR. 2, 1893

Wea.

One or two seen

Pewee

One seen in town

Chimney swift

Common

King bird

A few seen

Ther.

FRI. MAR. 3, 1893

Wea.

Laughlinstown June 25

Yellow Warbler.

One noticed in a
garden in town

Chipping Sparrow
abundant.

House Wren

One noticed in town

Bluebird

Several seen between
Laughlinstown and Ligonier
Meadow Lark

common about the
fields

Robin

abundant.

Redwing Blackbird

Several seen in the
meadows toward Ligonier

Cowbird

A number seen near town

Purple Martin

A number noticed

Grass Finch

Several seen

Ther.

SAT. MAR. 4, 1893

Wea.

Laughlinstown

June 26, '93

Green Heron

One noticed flying
over the meadows

Yellow winged Sparrow

One seen on the fence
by the roadside -

Ther.

SUN. MAR. 5, 1893

Wea.

6

Two miles South of
Idleroid Westmoreland Co.
June 26 Pa

Crow.

Several seen in fields
and woods

Scatterbrained Flycatcher

One or two seen in woods

Yellow Warbler

One seen near house

Red-eyed Vireo

Very abundant

Chimney

One or two seen in
hillsides

Red-eyed Vireo

Very common

everywhere

Field sparrow

common about bushy
fields

Hooded Warblers

One seen in a hillside
grown up to small bushes

Ther.

MON. MAR. 6, 1893

Wea.

Cerebird

a very common
species in the woods

Wood Thrush

Common in the
hillsides

Whippoorwill

One heard in the
evening

Ther.

TUES. MAR. 7, 1893

Wea.

June 27.

Explored the Holland
 toward Idlewild to some
 extent. Very rainy but
 quite a lot of birds
 observed. Skillet Blue D.
 the only Canadian species
 found. Following is a
 list of birds seen.

Redpoll Vireo abundant -
 Greenbird. very common
 Dmg. Sparrow

A few seen and
 one nest found with eggs
 Wood Thrush

Indicately common; one
 nest containing eggs
 found.

Black-throat Blue Warbler
 One seen on the hill.
 Well in quite heavy
 woods.

Ther.

WED. MAR. 8, 1893

Wea.

Black and White Warblers
 Several seen
 Redpolls bird.

A very common
 species. Every where
 Robin

Several observed
 Scarlet Tanager

Several noticed
 on the Holland
 Rose breasted Grosbeak
 One seen by roadside
 in woods.

Rusty Sh. Hummer
 One noticed about
 Laurel blossoms.

Blue Jay
 Several heard in
 woods.

Redwing Blackbird
 Common along Fox

mule Run
 Meadow Lake
 One or two noticed
 in meadow.

Ther.

THURS. MAR. 9, 1893

Wea.

Yellow B Chat

- A very common species
in open hillside

Flicker

Several noticed

Woodpecker

Several noticed
in woods on hillside
Spotted Sandpiper

Noticed in a field
by side of road.

Redstart

Several pairs found
and one nest about
30 feet high in white
oak

Field Sparrow

Common by the
roadside

Chipping Sparrow

Quite common

Catbird

Common in hillside

Am Goldfinch

One or two noticed

Ther.

FRI. MAR. 10, 1893

Wea.

Mourning Dove

Several seen

Great crested Flycatcher

Several noticed in edges
of woods

Red head Woodpecker

One noticed in

Long ground

Yellow throat Vireo

One shot by roadside

Cardinal

One seen by roadside

and others heard

Ball's Oriole

One seen in trees

by roadside

Red bellied Noddy

One seen in high

dead tree in woods

Ruffed Grouse

One heard clucking

and with young

and another started

Corvus

Very common

Ther.

SAT. MAR. 11, 1893

Wea.

Brown Thrasher

A pair seen by roadside

Corn Blackbird

One seen on tree

in meadow

Yellow Warbler

One seen at edge

of woods

White B. Nuthatch

A few noticed

in woods

Hickoryside Warbler

Two heard in

hillsides

B. L. Golden-winged Warbler

One seen in hillsides

growing up in bushes.

Hooded Warbler

One seen in same

situation as last.

Ther.

SUN. MAR. 12, 1893

Wea.

2 miles to Idleville

June 28

Explored a portion of the
Valley of Four Mile Run
and adjoining hillsides.
The following species were
noticed.

Yellow Billed Cuckoo.

Several seen and
a nest found in a laurel
bush containing two
young.

Indigo Bird

A very abundant
species

Woodthrush

Very common a
nest found in horizontal
limb of tree about 15
feet from ground

Downy Woodpecker.

One or two noted

Robin

Very common

Ther.

MON. MAR. 13, 1893

Wea.

Red-eyed Vireo

Very common

Redstart

A number observed

Mr B. Nuttall

Quite common

Crow Blackbird

A number seen
in a ravine through
which flows a small
stream

Yellow Breasted Chat

Quite common in
the thickets on the
Hillside

Ruffed Grouse

One or two heard
drumming

Hooded Warbler

This species seemed
to be quite common in
the thickets and one
was seen in the
high pines on a
hillside

Ther.

TUES. MAR. 14, 1893

Wea.

Scarlet Tanager

Are abundant species

Redwing Blackbird

Common in the
meadows, along Four-
mile Run

Redtail Hawk

An individual of
this species was seen
about the Ridge
Creek.

Very common

Catbird

Very common

Flicker

Several observed

B. & W. Creeper

Evidently quite common

Rose breasted Grosbeak

Several seen

Chickadee Warbler

One shot in a thicket
on a hillside but no
others observed during the
day

Ther.

WED. MAR. 15, 1893

Wea.

136 & 137 Blue Warbler
One seen on the
Hillside where it
was partly cleared
Pines

One observed
Yellowthroat Vireo
Several noted

Ther.

THURS. MAR. 16, 1893

Wea.

June 29
Crossed Chestnut
Ridge and proceeded
toward Mt Pleasant
while crossing the
Ridge the following
species were seen
Acadian flycatcher
One seen in some
by a small brook
Pines

Several seen and a
nest found in a
small cave by roadside
Barrenallows

Common about houses
Chimney swift

A number seen
Cave swallow
Quite a number
observed

Bluebird
Quite common

Y B Chat
Quite common

Ther.

FRI. MAR. 17, 1893

Wea.

Grass finch
Large numbers
were seen along the
roadside.

Horned Lark
a small flock
was seen on enter-
ing Mt Union.

Bobolinks were common
just below Mt Union
7 males being seen
at one time
A Sparrow Lark
was seen about 8
miles below Mt
Union

Ther.

SAT. MAR. 18, 1893

Wea.

June 30

Mount Pleasant.
Redwing Blackbird
Common about the
meadows and low fields

Crow Blackbird
A common species
Cowbird

A large number of
these birds were seen
in a pasture in which
was a herd of cattle
Chipping Sparrow
Very common

Song sparrow.
abundant.

Grass finch
large numbers
seen about the fields
Meadow Lark

A common species
Flicker
Several observed

Red Headed Vulture
Quite a number seen

Ther.

SUN. MAR. 19, 1893

Wea.

Wood Thrush

Several observed
in a thick piece
of woods.

Purple Martin

Abundant about

the town

Barn Swallows

Large numbers

seen about farm buildings

and along the roadside

Chimney Swift

Very common

Crows

Common

Robins

abundant

Cattails

Very common

Field Sparrow

Very common

Chowbirds

are abundant

found in the thickets

Ther.

MON. MAR. 20, 1893

Wea.

Indigo Bird

A very common

species observed

House Wren

Quite a number

observed

Pewees

Several seen near

buildings

Kingbird

Quite common about

fields and orchards

Am Goldfinch

Several seen by

the roadside

Yellow Breasted Chat

A number of this

species were noted

in the thickets

Maryland Yellowthroat

Two or three noted

Corvidae

Several seen in a

piece of thick woods

Ther.

TUES. MAR. 21, 1893

Wea.

Red-eyed Vireo

One common species

Scarlet Tanager

Several noted

Downy Woodpecker

One noted

Bluejay

Several noted

in the woods

Woodcock

two started in a

thick piece of woods.

Night Hawk

Several noticed

to-day evening

Carve swallow

Quite common

about buildings

Blatant Oriole

One seen in a piece

of oak woods

Spotted Sandpiper

Several seen in the

vicinity of a small

stream

Ther.

WED. MAR. 22, 1893

Wea.

Boblink

Several noted in

a low field

Linn

two or three heard

about the fields

Yellowing Sparrow

Several noted

by the roadside

Bluebird

Quite common

Great Crested Flycatcher

two or three noticed

in a piece of oak woods

House Wren

A pair seen by the

roadside

Brown Thrush

One seen

Yellow billed Cuckoo

Several noted

Whippoorwill

One heard in

the evening

Ther.

THURS. MAR. 23, 1893

Wea.

Wt Pleasant
July 1st.

Purple Martin
Common

Chimney Swift
A number noticed

Long sparrow
Numbers seen
along the roadside
and elsewhere

Chipping sparrow
Common about
houses

Robin
An abundant species

Calbird
Very common

Bluebird
A number noted

Kingbird
Several seen
about orchards

Ther.

FRI. MAR. 24, 1893

Wea.

Barn swallow
Common about
buildings.

Mourning Dove
One noted in a
pile of oak woods

Fluker
One or two noted

Killdeer Plover
Several seen about
a field

East swallow.
A number noted
Green Heron

Two noted in the
vicinity of a creek

Crow Blackbird
Abundant

Redwing Blackbird
Quite common about
low ground.

Spotted sandpiper
Several seen in the vicinity
of a small creek

Ther.

SAT. MAR. 25, 1893

Wea.

Pink

Common near houses
Grass finch

Very common
about the fields
Baltimore Oriole

A young bird
seen by the roadside
Am. Goldfinch
A number seen

Ther.

SUN. MAR. 26, 1893

Wea.

Mt Pleasant

July 3, '93

Yellow Warbler

One noticed in
a garden in town

Robin

abundant

Catbird

Very common

Long Sparrow

Numbers seen
Grass finch

Large numbers
noticed in the fields
Chipping Sparrow

Abundant
Redhead Warbler

A number seen
Downy Warbler

One noted in a
piece of thick woods
Red-eyed Vireo
Very common

Ther. MON. MAR. 27, 1893 Wea.

Combs

to have a number
seen in a thick
part of woods east
of the house

Indigo Bird

Chimney Swift

Meadow Lark

Abundant about
the low fields and
meadows.

Blue Jay

Crow

Chimney Swift

Bank Swallow

very common

Purple Finch

Very common

about the house

Wood Pewee

several noted

Ther. TUES. MAR. 28, 1893 Wea.

Scarlet Tanager

One or two seen
near the chimney piece
a morning before mentioned
chill

Heard in one or two
occasions

Indigo Bird

to have a number
seen in a thick
part of woods east
of the house

Meadow Lark

Abundant about
the low fields and
meadows.

Blue Jay

protruding its head
as if it was a species

Field Sparrow

about the house

Chimney Swift

about the house

Chestnut side warbler

two pairs were seen and

one nest found containing

three eggs

Carolina Chickadee

a pair seen in

the thicket

Ther.

WED. MAR. 29, 1893

Wea.

Hooded Mottler

One shot in a
thick piece of woods

Black breasted Cuckoo

One shot

Woodcock

One was started

in the thicket

Carolina Chickadee

One killed in

the thicket

Whippoorwill

A female with

a brood of young

was seen in the

thick piece of woods

where nearly all the

operations were made

The young were but a

few days old but

could fly well

Ther.

THURS. MAR. 30, 1893

Wea.

Lumut Lake

July 4. 93

Wood thrush

Very common

Robin

A number seen

Cardinal

Quite common in

the thickets

Scarlet tanager

One seen on a

cherry tree

Cherry bird

Common about

the cherry trees

Whippoorwill

One or two heard

in the evening

Chipping Sparrow

Several seen

Yellow Breasted Chat

Several noticed in

the thickets

Ther.

FRI. MAR. 31, 1893

Wea.

Mount Helen

Fayette Co Pa

July 5, '93

Woodhuck

Very common on the
slopes of Chestnut Ridge
A nest found containing
eggs.

Cardinal

Several noticed near
the foot of the Ridge
Red-eyed Vireo
abundant.

Hermit Warbler.

Found in
adult and young on
the side of the Ridge

Woodcock

Found to be quite common
on the lower part of the
slope

Downy Woodpecker.

One noticed on
the hillside

Ther.

SAT. APRIL 1, 1893

Wea.

Hermit Warbler

One was noted in
the woods of oak and
chestnut covering the
Ridge

Country

Among many species
B & W Creeper

Several seen on the ridge
of B Chat.

One noted on a
chestnut near the top of the
Ridge
Chimney

Two common on the
thickets

Louisa Warbler

Several met with
along a stream which
comes out from the ridge
Long Sparrow
Several noted

Kingfisher

Two seen at a small
reservoir pond

Ther. SUN. APRIL 2, 1893 Wea.

Acadian Flycatcher

One met with
near a small brook
Blk thro Blue Oriole.

One noted in the
oak woods near
base of ridge

Parula

One shot in edge
of woods

Redstart

Quite common

Chestnut side Warbler.

One met with
in woods near base
of Ridge

Whippoorwill

Heard in evening

Chimney swift

A few noticed

Ther. MON. APRIL 3, 1893 Wea.

Lewiston State on
July 6

✓ Wood thrush

A large number
seen on the hillside

✓ Robin

Very common

✓ Chickadee

Several noticed and
one killed in the
thickets near base
of Ridge

Redpoll Vireo

Abundant everywhere

Heuluckey Warbler

One met with in a
partially cleared place
on the hillside

Hooded Warbler

Several seen near
base of Ridge

Downy Warbler

One or two seen on
the hillside

Ther.

TUES. APRIL 4, 1893

Wea.

✓ Brown Thrasher

Several seen in a field
grown up to bushes

Chipping sparrow

Common about
fields and near
buildings

Gray sparrow

A number seen
Chat. 1

Two or three noted in
a bushy field

Calhoun

Several seen in
the same locality
Woodpecker

One seen on
the edge of woods

Orchard

Very common in

all the woods

Redstart

Several noted

Thrush

One or three seen in

Ther.

WED. APRIL 5, 1893

Wea.

The woods

Scarlet Tanager

Several seen about

Chestnut Ridge

Great crest flycatcher

One met within

mile of Ridge

Corn.

Several noted

Along river

Seen about the

reservoir

Ruffed Grouse

One started on

the side of the Ridge

Chestnut side. Thrasher

Met with one a partially
chased back to side

of Ridge

Redstart Blue or

One killed on

side of Ridge

Water Thrush

One shot at in

small creek

Ther. THURS. APRIL 6, 1893 Wea.

Ohio Pyle July 7, '93

Robin

Very common along
the river

Red-eyed Vireo

Extremely abundant.

Song sparrow

A number seen

Barn Swallow

Many seen along
the railroad near
the town

Purple Martin

a good many
about the town

Pewee

A number seen along
the river

Indigo Bird

Especially common
along the river and
on the hillside

Ther. FRI. APRIL 7, 1893 Wea.

Redstart

Several noted
Bt or Creeper.

Several seen
in the woods by the
side of the R.R.
Rough wing Swallow

Large numbers
observed flying about
over the water.

Centurion

Very common

Wood Thrush.

Very common
on the Hillside
Scarlet Tanager

Several seen
Downy Woodpecker
Several noted

Kentucky Warbler

Cuckoo heard
by the bank of the
creek

Flicker

A number seen

Ther.

SAT. APRIL 8, 1893

Wea.

Rose B Grosbeak
 Several seen
 on the hillside
 Oriole
 Very common
 Chipping Sparrow
 A common species
 Spotted Sandpiper
 A number noticed
 along the creek
 Blue Jay
 Several seen
 in the woods by
 the RR bank
 Brown Thrasher
 One seen in
 thicket by the side
 of the R.R.
 Wood Pewee
 One seen
 Harry W. Pitts
 One killed on
 the hillside
 Mourning Dove
 A pair seen.

Ther.

SUN. APRIL 9, 1893

Wea.

Robin
 Many seen
 Very common
 Catbird
 found very commonly
 along the river
 Song Sparrow
 Very common
 Chipping Sparrow
 A number seen
 Maryland Yellowthroat
 One noted near the
 river
 Chat.
 One was heard in
 the bushes along the
 bank of the river
 House Wren
 abundant in
 all the thickets
 Rough Shinned Crow
 Numbers seen

Ther. MON. APRIL 10, 1893 Wea.

about the river

Barn Swallow

Common about the
town

Am Goldfinch

A number seen

along the river

Crows

Common about

the hillsides

Chipping bird

A number seen

along the river

Or or Warbler

A pair seen on

the hillside

W N Nuthatch

A pair seen

Scarlet Tanager

Several noted

Mockingbird

Common

Amory Warbler

One or two seen

Ther. TUES. APRIL 11, 1893 Wea.

Flicker

Several noted on
the woods on the hillside

Bluejay

Several noted

Whippoorwill

A female seen
in a small ravine

Capped Warbler

One started on the
hillside in a growth
of small oaks

Blk cap chickadee

Two seen among

small oaks on a hillside

Chestnut side warbler

Two or three seen

in a scrubby portion
of the hillside

Chimney Swift

A number seen

flying about the town

Spotted Peewee

One or two seen along
the river

Ther.

WED. APRIL 12, 1893

Wea.

Confluence July 5.

at location two or
three miles toward
Sugarloaf Mountain.

A choppy, hilly
covered with quite a
heavy growth of oak
and chestnut.

The following birds were
seen on the way over
from Confluence.

Robin

abundant.

Bluebird

Several seen

Crow Blackbird

A number seen

near Confluence.

Redwing Blackbird

Seen about the

river near Confluence.

Cardinal

One or two seen

Ther.

THURS. APRIL 13, 1893

Wea.

near Confluence
Cherry bird

Several were passing
their flycatching about
the river near Confluence.
Chipping sparrow
Common everywhere.

Perch

Several noted along the
route.

Woodpecker

One or two noted

Hight hawk

Several observed in the
evening.

Ther.

FRI. APRIL 14, 1893

Wea.

Sugarloaf Mt.

July 10

Bluebird

Several observed

Red-eyed Vireo

a very abundant

species everywhere

Chenuek

A number observed

Wood Thrush

A common bird

in all the woods

Crow

Abundant

Songbird

For young killed

and one or two

adult birds seen

Blk thro Blue Warbler

A common species

in the side and

summit of Sugarloaf Mt

Indigo Bird

An abundant species

Ther.

SAT. APRIL 15, 1893

Wea.

Corvid

A common species

Blk cap chickadee

Several observed

in the Mountain

Grass Finch

common in all

the fields in and

about the Mt

Chestnut side Warbler

Several observed

in the partially cleared

tracts

B & W Warbler

Very common in all

the woods.

Field sparrow

common in the

bushy fields

Canadian Warbler

a very common

species usually found

in the hardwood

thickets

Ther.

SUN. APRIL 16, 1893

Wea.

Mourning Dove

A few pairs

observed

Scarlet Tanager

Several seen

around on the Mt.

Thelma Thrush

A common species

in the Mountains

H. B. Nuthatch

Common in the

oak woods

Catbird

Quite common in the

Mountain side

Redhead Warbler

One seen on top of

the Mt.

Downy Warbler

Several seen

in the Mt.

Brown Thrush

One met with

on top of the Mt.

Ther.

MON. APRIL 17, 1893

Wea.

Song Sparrow

Common about the
fields especially in
wet places

Ruby Crest Hummer

One met with on

the Mountain

Bluejay

Several seen.

T. Flicker

A few seen in the

Mt.

Ruffed Grouse

Several met with

one with a brood of
young a few days old

Hairy Warbler

Several seen in

the oak woods

Broadwing Hawk

Last seen in the

oak woods on the Mt.

Blk. & Green Warbler

One met with in the

oak woods

Ther.

TUES. APRIL 18, 1893

Wea.

Woodpecker

A common species
in the deep woods
Solitary Vireo

One noted in
the oak woods on the
Mt.

Whippoorwill

One noted in
the evening.

Ther.

WED. APRIL 19, 1893

Wea.

Lugartree Mt.
Robin July 11

A number observed
Bluebird

One or two seen
Grass finch

Common about the
fields

Chipping Sparrow

A very abundant bird
about the fields and
near houses

Field sparrow

A number seen

Chimney

A very common
species

Common Thrasher

One or two observed
on the Mt by the road
side

Flicker

Several seen
Indigo bird
abundant

Ther.

THURS. APRIL 20, 1893

Wea.

Red-eyed Vireo
Very common

Chickadee 17.

Lizard seen

Wilson's Thrush

A number seen and
one shot in a
rhododendron thicket

W. N. Nuthatch

Common in the

leafy woods

Black-throated Blue

A number observed
and a nest found

in a rhododendron
bush 100 feet from

ground. Nest com-

posed of sticks of
dark and - lined

with fine white
and hair. Young.

Corvidae

A number seen
in the woods.

Ther.

FRI. APRIL 21, 1893

Wea.

Scarlet Tanager
A number seen
Wood thrush

A number seen
Solitary Vireo

With a number
noted in the oak and
chestnut woods on
the Mt.

Woodpecker

A common species
Downy Woodpecker

Several seen
in the woods on the
Mt.

The following species
were seen -

~~Wood thrush~~ -

Purple Martin

Brown Towhee

Two small ones

Kingbird

Condalia

Catbird

Corvidae

Ther.

SAT. APRIL 22, 1893

Wea.

The woods on Sugarloaf Mt. are composed almost wholly of oak and chestnut. No cypresses are found at all. The shadowy deep down forms thickets at places especially along the small streams. The Mt. is not well defined in its limits. It being up-hill nearly all the way from Confluence. My stopping place was about 3 miles from Confluence and excursions were made from there to the top of the Mt. 3 or 4 miles further

Ther.

SUN. APRIL 23, 1893

Wea.

Birds seen from Rockwood to Negro Mt. July 22, 93

Purple Martin
Common about the barn

Barn swallows
Common about Rockwood and outlying places out in the country

Robin
A common species every where

Red-eyed Vireo
Very abundant

Solitary Vireo
Common in the higher woods especially where there are Liriodendrons

Chipping sparrow
A very common bird of Canadian Prairies
Common on Negro Mt.

Ther.

MON. APRIL 24, 1893

Wea.

and along a small
brook near Rockwood
where there was quite
a growth of hemlock
and also deciduous
trees that Blue Warblers

A large number
seen

Wood pewee

A common bird
in the deep woods
Wilson's Thrush

A large number
seen

Magnolia Warbler

Quite a number
seen.

Sharp-shinned Hawk

One seen in the
hemlock woods one

of which was shot
Bill cap chickadee

Quite common in the
hemlocks and about
Kegonsa Mt.

Ther.

TUES. APRIL 25, 1893

Wea.

Orchard

A very common bird
Chestnut-sided Warbler
Common about
partially cleared
tracts

Indigo Bird

Several seen

Chimney

a common species

Wood thrush

Common about
Kegonsa Mt.

Mourning dove

A few noted

H. B. Nuthatch

Quite common

Crow

Common

B. & W. Creeper

Quite common in
the hemlock woods
and about Kegonsa Mt.
Scarlet Tanager
A number seen

Ther. ~~WED.~~ APRIL 26, 1893 Wea.

Flicker

A number noted
Ruffed Grouse

One started
in the chestnut woods
on the side of Negro
Mountain

Bluejay

Several noted
Maryland Yellowthroat

One noticed
on the mountain
in a place of woods
grown up

Blueberry and other
berries

Yellow B Cuckoo

One seen on
the mt. in the
chestnut woods
Rose B Grosbeak

One seen in the
oak and chestnut
woods.

Ther. ~~THURS.~~ APRIL 27, 1893 Wea.

Night Hawk

A number noted
Crows
Grass Finch

A number noted
in a field several
miles south of Rocking
House Inn

One seen on com-
pany with a young
one near Negro Mt.
Barrell owl.

One was killed
in the early morning
in a thick hemlock
woods near the base
of Negro Mt.

Whippoorwill

One killed and
several others noted
in the morning

Ther.

FRI. APRIL 28, 1893

Wea.

Rockwood July 13/93
Carmichael

Common about
the town

Robin

Abundant

Chipping Sparrow

Common

Red-eyed Vireo

Very common

in the woodland

Solitary Vireo

Several noted

in a piece of hem-
lock woods near
a small stream

Canadian Warbler

Several noted

Black-throated Blue Warbler

A number seen

in the hemlock woods

Louisiana Water Thrush

One met with

at a small stream

in the hemlock woods

Ther.

SAT. APRIL 29, 1893

Wea.

Pine

One or two noted
Wilson's Thrush

Several noted in

the hemlocks

Scarlet Tanager

a pair seen

Hummingbird

Several noticed

about the town

Cherry Bird

Several were

seen near Rockwood

from the train as

I left in the evening

Ther. SUN. APRIL 30, 1893 Wea.

Meyersdale Pa
July 14 '93

Purple Martin

Very common about
town

Robin

Common in all
situations

Pewee

Numbers seen
along the railroad
and elsewhere

Goldfinch

A number seen

Song sparrow.

abundant

Grass finch

Common in
fields along the
railroad

Chipping Sparrow

Common everywhere

Yellow wing Sparrow

One or two seen

in fields along R.R.

Ther. MON. MAY 1, 1893 Wea.

Kangaroo

abundant along
the R.R. - old and
young being in
company

Red-eyed Vireo

Very common
specimens

Chewink

Common on the
brushy hillsides

Scarlet tanager

One or two pairs
noted

Redbird

Very common in
the thickets

Brown thrush

Very common in
same situations

Wood thrush

Common in
the hillsides in
damp woods

Ther.

TUES. MAY 2, 1893

Wea.

Wilson's Thrush

Common in

~~various~~ situations

Es. last

Chatsworth Warbler

Very common in the
oak woods at the
hillside and summit

Bluebird

Observed mainly
along the RR on the
hilly side near and
nearby

Flicker

Very common
everywhere
Crows

Observed in

nearly all situations
Downy Woodpecker

Very common in
a hillside where it
was seen to feed
on the berries of the

Ther.

WED. MAY 3, 1893

Wea.

Red breasted Sucker

seen also seen elsewhere

Red breasted Grosbeak

A very common

bird in nearly all
situations

Mayfield Warbler

A few seen in
the thickets on the
side of ~~the~~ the Mt.
Leander Warbler
abundant in the
thickets

or B. Warbler

A few seen in the
oak woods on the
Mts.

Harry Wren

Very common
on the hillside among
the young
trees

Swainson

A number seen in
the hillside

Ther. THURS. MAY 4, 1893 Wea.

Ther. FRI. MAY 5, 1893 Wea.

Ther.

SAT. MAY 6, 1893

Wea.

B & W Creeper

Very common

in the woods

Blue Jay

Very abundant

everywhere

Blk thro Blue Warbler

One or two met with

on the Mt side

Barn swallow.

Common about

the house

House Wren.

Met with one

Just over the line,

on top of the Mt.

Here there were a

few patch grass

and small oak

bushes.

Blk cap chickadee

A few seen on

the Mt.

Manyland Yellow throat

Observed on the

Ther.

SUN. MAY 7, 1893

Wea.

Mt in the thickets

of small oaks

Mountain Dove

A few seen in the

Mt creek, a nest

found. This was

the first of the season.

and contains two

young a few days

old.

Mt. Wren

an adult

accompanied by a

young one. was seen

in the thickets

on the hillside

Field sparrow

A few met with

on the Mt.

Night Hawk

Several nested

toward evening

Y B Chat.

Several seen

in the oak bushes on

Ther.

MON. MAY 8, 1893

Wea.

the side of the Mt.
Catherine Circle

One or two seen
in a bushy hillside
Cherry bird

A few seen on
the hillside
Indigo bird

A few seen in
the lake bushes
Blue & golden winged

A pair, accompanied
by young ones, seen
in the lake bushes
in a hillside

Ther.

TUES. MAY 9, 1893

Weyersdall Pa
July 15

Robin

Bluebird

Long sparrow

Chipping sparrow

House Finch

Field sparrow

Yellow winged sparrow

Rose B. Grosbeak

Indigo bird

Redhead Warbler

A pair of these
birds was seen in the
telegraph poles between
the railroad between
Weyersdall and the Mt.

Electric

Chimney

Catbird

Redwinged Starling

Thompson's Yellowthroat

Pacific Wren

Ther.

MON. MAY 8, 1893
WED. MAY 10, 1893

Wea.

12. 1000 ft. above

Indefinite

11. 1000 ft. above

10. 1000 ft. above

9. 1000 ft. above

8. 1000 ft. above

7. 1000 ft. above

6. 1000 ft. above

5. 1000 ft. above

4. 1000 ft. above

3. 1000 ft. above

2. 1000 ft. above

1. 1000 ft. above

0. 1000 ft. above

1000 ft. above

1000 ft. above

1000 ft. above

1000 ft. above

1000 ft. above

1000 ft. above

1000 ft. above

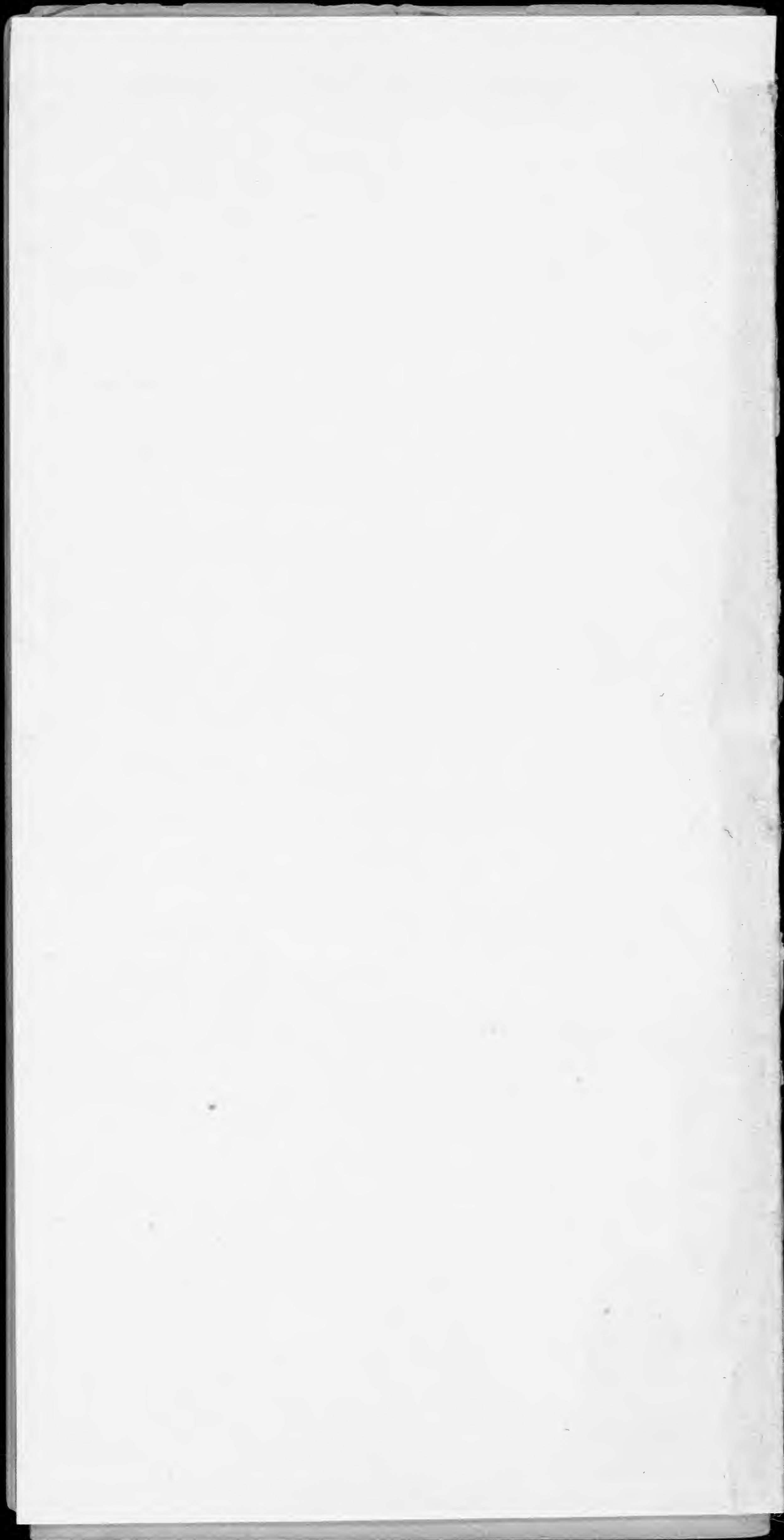
1000 ft. above

1000 ft. above

1000 ft. above

1000 ft. above

1000 ft. above



Melrose Thrush
Cape Goldfinch
Purrr

Black-bellied Plover

Canadian Warbler

Barren Warbler

Black-bellied Plover

Black-throated Blue Warbler

Scarlet Tanager

Mourning Dove

Carolina Wren

Whippoorwill

Endless June 10 93
Somerset

Bobolink

Purple Martin

Robin

Song Sparrow

Meadow Lark

Cherry Bird

Chimney Swift

Chipping Sparrow

Chickadee

Red-winged Blackbird

Catbird

Field Sparrow

Chimney

Chickadee

Brown Thrush

Ring-billed Gull

Black-bellied Plover

Scarlet Tanager

Mourning Dove

White-bellied Nuthatch

Song Sparrow

Hardy Hawk

Black-throated Blue Warbler

Hermit Thrush

Chickadee

Mourning Dove

Black-throated Blue Warbler

Canadian Warbler

Ruffed Grouse

Red breasted Nuthatch
 Bluebird
 Chat
 Indigo Bunting
 House Finch
 Sharp-shinned Hawk
 Myio. virens
 Purple Finch

Linn. & Townsend
 June 11. 93

Meadow Lark
 Redwing Blackbird
 Kingbird
 Purple Grackle
 Robin
 Bluebird
 ✓ Academe Flycatcher
 House Wren
 Song Sparrow
 Indigo Bunting
 Brown Creeper
 Catbird
 Field Sparrow
 ✓ Chestnut-backed Warbler
 Cowbird
 Mockingbird
 Flicker
 ✓ Towhee
 ✓ Spotted Towhee
 ✓ C. v. l.
 ✓ Killdeer
 ✓ Grass Finch
 ✓ Yellow-rumped Sparrow
 ✓ Yellow Warbler
 Blue Jay
 Crow
 ✓ Red-tailed Hawk
 ✓ Red-shouldered Hawk

Chickadee - 100
Yellow B. Warbler
P.L. Blue - 100
Hermit - 100

Harrisonville
to Junction Cross
Roads June 21, 70
Some Canadian
Country ~~between~~
about half-way
between Harrison
and Junction X Roads.
There are Canadian
lands observed
No Campers at
the X Roads apparently
Horned Larks seen
between X Roads
and Junction
also Quail.

Beyond summit

Black-belt Blue W
Nelsons Thrush
Green-bird
Canadian W
Wood Thrush

Heaven Lark
Spotted Sandpiper

June 23 94

Laughlin's Lark

Robin

Crow Blackbird

Catbird

Meadow Lark

Field Sparrow

Chestnut-sided Warbler

Acorn Woodpecker

Red-eyed Vireo

Chickadee

U.S. Chat

Goldfinch

Flicker

Crow

Field Sparrow

Ball's Bluebird

Brown Creeper

Brown Creeper

White-throated Sparrow

Chipping Sparrow

Yellow Warbler

White-throated Sparrow

Black-throated Blue Warbler

Canadian Warbler

Blue-eyed Yellow Warbler

Black-throated Green Warbler

Redstart

Scrub Wren

Rock Wren

Melospiza Thrush

B. & W. Creeper

Black-throated Bluebird

Wood Pewee

Yellow B. Creeper

Meadow Lark

Mourning Dove

Whippoorwill

36

Loughlinstown

June 24 1893

✓ House Wren

✓ Barn Swallow

Crow Blackbird

✓ Song Sparrow

Red-eyed Vireo

Robin

Chaffinch

Robin

Chimney

Crow Blackbird

Chat

Tree Sparrow

Chipping Sparrow

Crow

House Wren

Brown Thrasher

Picker

Brown Goldfinch

✓ Ring-billed Gull

Scarlet Tanager

Crow & Sparrow

✓ Blue-winged Teal

✓ Lark

House Wren

Chaffinch

Black-throated Blue

Red-eyed Vireo

Wilson's Thrush

✓ Mockingbird

✓ White-throated Sparrow

✓ Pigeon

✓ Chimney Swift

✓ Kingbird

Long Island Sound

June 25

- ✓ Yellow Warbler
- ✓ Chipping Sparrow
- ✓ House Wren
- ✓ Bluebird
- ✓ House Wren
- ✓ Robin
- ~~Chipping Sparrow~~
- ✓ Redstart
- ✓ Cowbird
- ✓ Purple Martin
- ✓ Goldfinch

Long Island Sound June 26

- ✓ Song Sparrow
- ✓ Yellow winged Sparrow
- ✓ Maryland Yellow Throat

June 26

2 miles S. Idempott
Westmoreland Co Pa

- Crow
- ✓ Great flycatcher
- Yellow Warbler
- ✓ Redstart
- ✓ Cowbird
- Indigo Bird
- Field Sparrow
- Hooded Warbler
- Green bird
- ✓ Wood Thrush
- Whippoorwill

Page 27

General View

Chandana

Very truly yours,

Tree Toad

Black Blue Paper

V. M. A. 10

Index book

17

1911

V. R. ...

✓ Rother Hood

13th

1944

Wm. South

✓ 12

[Faint handwritten notes or bleed-through from the reverse side of the page.]

[Faint handwritten signature]

100

(continued)

1. The first group of people who are interested in the study of the history of the world are the historians. They are people who study the past and write about it. They are interested in the events that have shaped the world and the people who have lived through them. They are also interested in the changes that have taken place over time and the reasons for these changes. They are people who are curious about the world and want to know more about it.

2000

1000

V. V. V. V. V.

U. S. 1000 1000 1000

at 1000

[illegible]

Volume 1000

Red Bull Natty 30

VPR 1000

Card

V. *Am. ...*

[illegible]

1. *Chrysomelidae*

1944

... ..

V. *Chrysomelid* *beetle* *5/1*

Blue - yellow - orange -

1940

June 28

- ✓ Yellow bellied Cuckoo
- ✓ Indigo Bird
- ✓ Indigo Bush
- ✓ Lumpy Warbler
- ✓ Robin
- ✓ Red-eyed Vireo
- ✓ Redstart
- ✓ White B. Nuthatch
- ✓ Cow B. Suckbird
- ✓ YB Chat
- ✓ Ruffed Grouse
- ✓ Hooded Merganser
- ✓ Scarlet Tanager
- ✓ Redwinged Blackbird
- ✓ Red-tailed Hawk
- ✓ Chimney Swift
- ✓ Catbird
- ✓ Flicker
- ✓ B + W Creeper
- ✓ Rose B. Grosbeak
- ✓ Chestnut-sided W.
- ✓ Blue-throated Green Warbler
- ✓ Pewee
- ✓ Yellow-throated Vireo

June 29

Chestnut Ridge

- ✓ Acadia Flycatcher
- ✓ Flicker
- ✓ Barn Swallow
- ✓ Chimney Swift
- ✓ Bluebird
- ✓ East Swallow
- ✓ House Finch
- ✓ YB Chat
- ✓ Mt. Vireo
- ✓ Bobolink common
- 7 males being seen at one time
- large flock of House Wrens
- ✓ Lutes were seen on entering Mt. Vireo
- ✓ Lawrence's Sparrow
- ✓ One seen about 3 miles below Mt. Vireo

My Pleasant

June 30 '93

Ring-necked Pheasant

Corn Blackbird

Corn Bird

Chipping Sparrow

Long Sparrow

Red-winged Blackbird

Red-winged Blackbird

Red-winged Blackbird

Red-head Vireo

Wood Thrush

Purple Warbler

Barn Swallow

Chimney Swift

Crow

Robin

Catbird

Gold Sparrow

Chimney Swift

Orange-bellied

Black-bellied

Plover

Kingbird

Blue Jay

U. S. Warbler

Gray and Yellow Warbler

Crow

Red-eyed Vireo

Scarlet Tanager

Downy Woodpecker

Bluejay

Woodcock

Night Hawk

Evening Star

Battlement Oriole

Spotted Towhee

Bobolink

Quail

Yellow-rumped Sparrow

Bluebird

Red-capped Flycatcher

House Wren

Brown Thrush

Yellow-b. Cuckoo

Thrush

44

July 1 90

Mt Pleasant Pa

Purple Martin
Chimney swift
song sparrow
chipping sparrow
Robin
Cattbird
Bluebird
King bird
Barn swallow
v Wood pewee
Flicker
v Yellow Plover
Eve swallow
v Green Heron
Common Blackbird
Blue jay
Spotted Sandpiper
Pewee
Townsend
Pied-billed Grebe
Chestnut-backed

Mt Pleasant Pa

July 3, 90

Yellow Warbler
Robin
Cattbird
song sparrow
chipping sparrow
Chestnut-backed Sparrow
Red-headed Vireo
Downy Woodpecker
Red-eyed Vireo
C. warbler
Indigo-bird
Cherub
Meadow Lark
B. bluejay
Crow
Chimney Swift
Barn Swallow
Purple Martin
Wood Pewee
Scarlet Tanager
Quail
Wood Thrush
Yellow B. Cuckoo
Field Sparrow
v Chestnut-sided Warbler
v Cardinal
v Hooded Mallow
v Black-bellied Cuckoo
v Carolina? Chickadee

Lewistown Station
Toyle's Cove
July 4

Wood Thrush
Robin
Cardinal
Tanager
✓ Cherry Bird
Whippoorwill
Chipping Sparrow
Yellow R. Chat

Lewistown Station
July 5

Wood Thrush
Robin
Cardinal
Rufous Grouse
Scaly Thrush
Hooded Warbler
Downy Woodpecker
Carolina Wren
Cuckoo
S. W. Creeper
Yellow R. Chat
Chickadee
Louisiana Water Thrush
Song Sparrow
Yellow Warbler
Academy Flycatcher
Blk. thro. Blue
Pewee
Redstart
Chipping Sparrow
Whippoorwill
Chimney Swift

Lancaster Maine
July 6.

Cardinal
Nuthatch
Chipping Sparrow
Red-eyed Vireo
American Thrasher
Song Sparrow
Shrike
Nuthatch
✓ Wood Pewee
Crows
Redstart
Rusty nighthawk
Titmouse
Scarlet Tanager
House Wren
✓ Oriole
Hooded Warbler
Song Sparrow
✓ Red-bellied
Chestnut-sided
Kentucky Warbler
Black-throated Green
Yellow Warbler

Chesapeake
July 7

Robin
Red-eyed Vireo
Song Sparrow
✓ Brown Swallow
Purple Martin
Pewee
Indigo Bunting
Redstart
R. or Creeper
! Rough W. Swallow
Cathart
Wood Thrush
Tanager
Song Sparrow
Kentucky Warbler
Thicket
R. W. Creeper
Crows
Chipping Sparrow
Spotted Thrush
Blue Jay
Brown Thrasher
Wood Pewee
House Wren
House Wren
Night Hawk

Ohio Park
July 5.

Robin
C. Wren
Song Sparrow
Chipping Sparrow
v Meadowlark Yellow throat
v C. Wren
Indigo Bunting
Rough winged Swallow
Blue Jay
v Downy Woodpecker
v Chickadee
v Cherry Bird
B + W Warbler
v W. B. Nuthatch
v Indigo Bunting
v Wood Thrush
v Downy Woodpecker
v Flicker
v Blue Jay
v White-throated Sparrow
v Ruffed Grouse
v B. L. Eagle Chickadee
v Chestnut-sided Warbler
v Hummingbird
Spotted Towhee

Confluence
July 6

Robin
Blue Jay
v Cow Blackbird V
v Meadowlark Blackbird V
v C. Wren V
Cherry Bird
v Song Sparrow
v Purple Finch U
v Towhee V
v Towhee V
v Spotted Towhee V

Continued (Laguna)

July 10

Blue bird

Ringed Plover

Chimney

Small bird

Wren

Swallow

BLK throat Blue W.

Chimney

Red of Orin

Junco bird

Acorn

BLK cap Chickadee

Wren

Field Sparrow

Canadian Warbler

Humming Dove

Scrub Wren

Wren

W. W. Flycatcher

Catbird

Red head Warbler

Brown Warbler

Brown Thrush

Field Sparrow

Rocky (W. H. Wren)

Red

Fl. Wren

Rufous

Wren

Wren

Blackthroat Oriole

Wren

Golden Plover

Whippoorwill

Confluence (Sugar Creek)

July 11 '93

Robin
Bluebird
House Finch
Chipping Sparrow 12
Field Sparrow
Hummingbird
Mountain Bluebird
Flicker
Indigo Bunting
Red-eyed Vireo
Chestnut-sided
Mourning Dove
H. B. Nuthatch
Blue-throat Blue W.
Ovenbird
Scarlet Tanager
Wood Thrush
Solitary Vireo
Mockingbird
Downy Woodpecker

Lugawag to Confluence

July 11

✓ Purple Martin
✓ Barn Swallow
✓ Dove
✓ Kingbird
✓ Cowbird
✓ Catbird

✓ Catbird at Reckoning

Rockwood

Reg. as 7th

July 12

Purple Martin
Barn Swallow
Robin
Red-eyed Vireo
Solitary Vireo
Chipping Sparrow
Canada Warbler
Blue-throat Blue W.
Mockingbird
Wilson's Thrush
Magnolia Warbler
Sharp-shin Hawk
Blue Cap? Chickadee
Ovenbird
Chestnut-sided W.
Indigo Bunting
Chimney Swift
Wood Thrush
Mourning Dove
H. B. Nuthatch
Crow
R. W. Creeper
Scarlet Tanager
Flicker
Ruffed Grouse 34
Blue Jay
Hairy Woodpecker
Yellow B. Warbler
R. B. Grosbeak
Night Hawk

Rockwood July 14

Robin

Chipping Sparrow

Red-eyed Vireo

Military Vireo

Canadian Warbler

Blk. Thr. Blue

V. Lutescent

V. Parula

Yellowthroat

Scarlet Tanager

V. Lutescent

Cherry Vireo

Rockwood

Seen from Train

Mayers date July 14

Purple Martin

Robin

Parula

Goldfinch

Long sparrow

Grass Finch

Chips. Sparrow

Yellow Vireo

Gray Bird

Red-eyed Vireo

Cherry Vireo

Scarlet Tanager

Catbird

Brown Thrush

Wood Thrush

Wilson's Thrush

Chestnut side

Bluebird

Flicker

Grackle

Brown Noddy

R. B. Grosbeak

Mag. White

Can. Wren

R. B. Nuthatch

Gray Noddy

Junco

R. B. Creeper

Blue Jay

desert thrush
 Barn Swallow
 Red eye vireo
 Maryland Yellow throat
 Mourning Dove
 House Sparrow
 Field Sparrow
 Night Hawk
 W. Chat.
 Baltimore Oriole
 Cherry Bird
 Indigo Bunting
 White Throated sparrow W

Meyersdale Pa
 July 15

Robin
 Bluebird
 Song Sparrow
 Chipping Sparrow
 Grass Quail
 Field Sparrow
 Yellow wing Sparrow
 Rose B. Grosbeak
 Indigo Bunting
 Red Headed Woodpecker
 Flicker
 Chewink
 Catbird
 Red eye vireo
 Maryland Yellow throat
 Purple Martin
 Barn Swallow
 Goldfinch
 W. R. Nighthawk
 Brown Thrush
 Kingbird
 Chat
 Chestnut side W
 Canadian W
 House Wren
 Red start
 Yellow wing W
 Mockingbird W
 Indigo Bunting
 Starling

43

✓ Blue-gray Gnatcatcher
 Downy Woodpecker
 Hairy Woodpecker
 Flicker
 Downy Woodpecker
 Red-bellied
 Yellowthroat
 White-throated
 Blue Jay
 ✓ Small blue Gnatcatcher
 Wood Thrush
 ✓ Mourning Dove 57